MADISON SUB-BRANCH,
U. S. DEPT. OF AGRICULTURE LIBRARY,
FOREST PRODUCTS LABORATORY,
MADISON 5, WISCONSIN

PULP & PAPER INDUSTRY

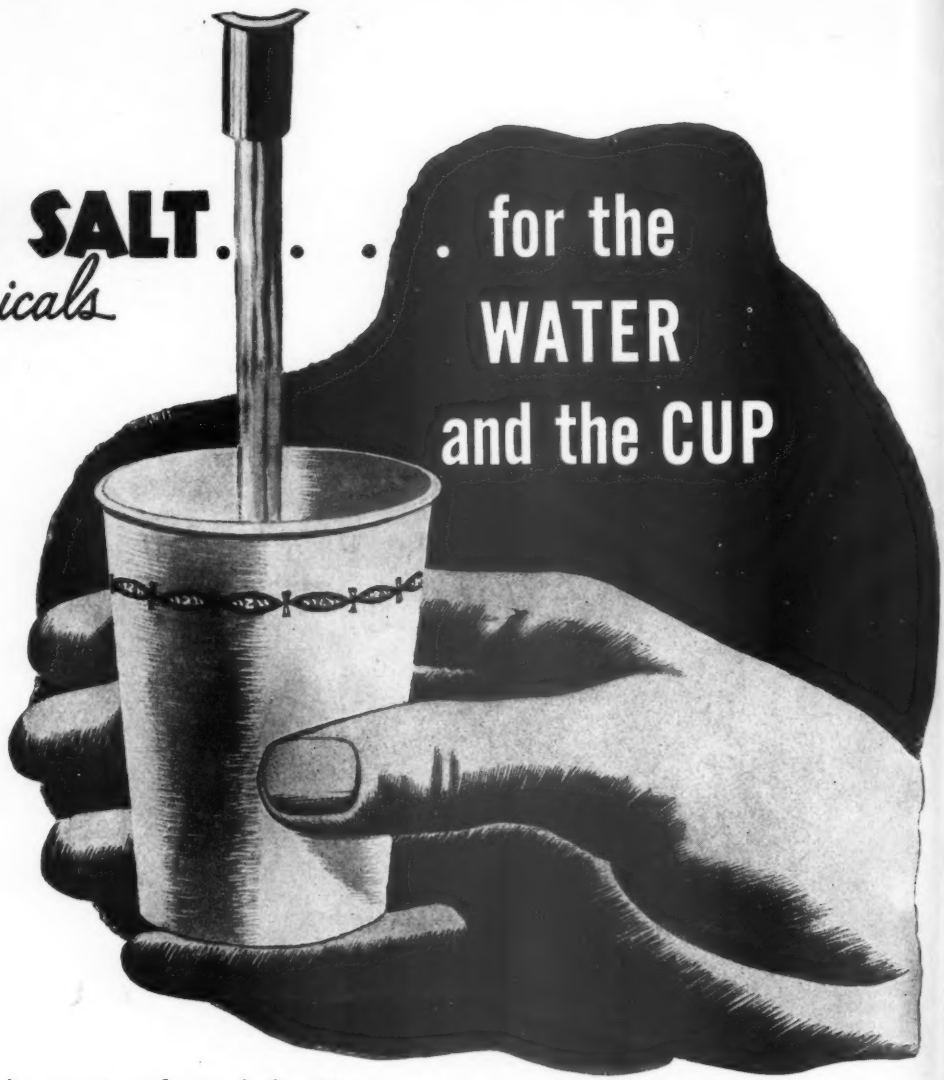
"The Cellulose Age"
TRADE MARK APPLIED FOR

JULY-1945
VOL. 19 NO. 7

Mile-Wide KVP MILLS and MODEL CITY (Parchment, Mich.) That KVP Built. No. 1 Mill (Left) Houses Two Paper Machines; No. 2 Mill (Right) Houses Four. Now KVP Is Building a NEW MODEL CITY and PULP MILL in Canada . . . See Page 14 for Illustrations and Details. *(Inset—Ralph A. Hayward, President of KVP, Who Will Also Be President of KVP Ltd.)*

SERVING THE INDUSTRIES OF THE WEST

PENN SALT Chemicals . . . for the WATER and the CUP



Two important products of the West are pure water and good paper. Penn Salt Chemicals contribute to both!

Penn Salt Chlorine is widely used throughout the West for water purification.

Penn Salt Liquid Chlorine and Caustic Soda are thoroughly established as reliable products in the pulp and paper mills.

The Pennsylvania Salt Manufacturing Company of Washington is here to serve Western industries. We shall be glad to assist any pulp or paper plant with problems concerned with use of our chemicals.

PENNSYLVANIA SALT
MANUFACTURING CO. OF WASHINGTON
Chemicals
TACOMA, WASHINGTON

Penn Salt Products include:

Liquid Chlorine
and Caustic Soda
for the Pulp and Paper Industry

Also

Bleaching Powder • Corrosion-proof Cements
Anhydrous and Aqua Ammonia • Acids
Perchloron* • Sodium Chlorate
Potassium Chlorate • Sodium Arsenite
Sodium Hypochlorite • Hydrogen

*Trade-mark Reg. U. S. Pat. Off.

Pulp & Paper Industry is published once a month, at 71 Columbia St., Seattle, Wash. Subscription: U. S., $4.00; Canada, $4.50; other countries, $5.00. Entered as second class matter May 20, 1927, at the Postoffice at Seattle, under the Act of March 3, 1870. Copyright, 1945, by Miller Freeman Publications.

PULP & PAPER INDUSTRY

"The Cellulose Age"

TRADE MARK APPLIED FOR

Vol. 19 — No. 7

JULY • 1945

MEMBER AUDIT BUREAU OF CIRCULATIONS

The Management Journal Covering North America's Wood Pulp, Paper and Cellulose Industries

SEATTLE (4)

Miller Freeman.....President
Lawrence K. Smith.....Manager
Albert Wilson.....Editor
Miller Freeman, Jr...Circulation Manager
Lucile Ayers.....Assistant Editor
W. E. Crosby.....Forestry Editor

Publishing Office
71 Columbia St.....Tel. MA. 1626

NEW YORK (17)

Nard Jones.....Associate Editor
370 Lexington Ave. (120 East 41st St.)
Tel. Murray-Hill 3-9295

PORTLAND (4), ORE.

Chester A. Fee.....Associate Editor
534 S. W. 3rd Ave.
Tel. Beacon 6348

NEW ORLEANS (12)

Wm. J. Krebs.....Southern Editor
333 St. Charles Ave...Tel. Magnolia 7651

VANCOUVER, B. C.

Charles L. Shaw.....Canadian Editor
675 W. Hastings St.....Tel Marine 1520

SAN FRANCISCO (5)

Stuart Leete.....Regional Editor
121 Second Street.....Tel GA. 5887

LOS ANGELES (13)

Arthur Ponsford.....Regional Editor
124 W. Fourth St.....Tel. MUtual 8196

DENVER (2), COLO.

Karel Wegkamp.....Regional Editor
711 Colorado Bldg.....Tel. Keystone 6051

Contents Copyrighted 1945 by
Miller Freeman Publications, Inc.

SUBSCRIPTION RATES

United States	**$4.00**
Canada	**$4.50**
Other Countries	**$5.00**
Single Copies	**$ .35**
Review Number	**$1.00**

CONCERNING "COMPANY TOWNS"

Editorial

EDITORS of PULP & PAPER INDUSTRY were recent guests at both the papermaking and converting operations of Kalamazoo Vegetable Parchment Co. in Michigan and that company's new pulp mill which is rising in Ontario. Their observations are reported pictorially and editorially beginning on Page 14.

In this column, it is fitting to comment on the character of "the company town" at Parchment (cover picture) and "the company town-to-be" at Espanola, which they visited. The first one is most decidedly a credit to the pulp and paper industry everywhere; the second will certainly be no less a one.

For one thing, "Uncle Jake" Kindleberger, the founder of KVP, did not believe in "paternalism." Nor does Ralph Hayward, his successor in the active management of the company.

The beautiful little city of Parchment has become familiar to touring editors of PULP & PAPER INDUSTRY over many years and the non-paternalistic atmosphere of the place as well as its physical beauties have always quickly impressed the visitor.

About 1,000 persons live there now—and about 85% of these work in the mill. Of the 1300 employes, 50% live in nearby Kalamazoo, and they were perfectly free to make their homes there. Many of them are awaiting eagerly the day when lifting of war restrictions on building will permit them to move to Parchment.

Eighty-five per cent of Parchment's residents own their own homes. The company at first owned all the ground, but "Uncle Jake" established for one year a policy that property only be sold to those who built and lived on a lot. Furthermore, he stipulated that such sales should be encouraged and assisted in every way possible. There is variety and individuality in the architecture of these homes.

"Uncle Jake's" farm of 80 acres has long since become a beautiful city park. (What old timer doesn't remember his home-grown tobacco which he passed around freely to business associates, along with his masterpiece of friendly advice and counsel in little printed booklets?)

KVP has built a community house and other excellent recreational facilities, some of which can be seen in the cover photograph. Drinking water for the town is filtered at the mill.

Parchment boasts that it has the best primary and junior high school in Michigan, which is quite fitting with Mr. Hayward a former professor and now a regent of the University of Michigan. The city has many of the cultural advantages of any big city and those it may not have are available in Kalamazoo.

The Civic Theater of Kalamazoo is an institution which impresses any visitor. Here employes of KVP and other nearby mills act in, and help produce; first class stage plays.

While enjoying every freedom of expression individually, and every advantage of life, the citizens of Parchment at the same time have many exclusive and above-ordinary privileges. One of these which merits mention is that the company takes care of 95% of total city taxes.

Many travelers have expounded upon the beauties and advantages of Hershey, Pa., one of the most famous of "company towns." A worthy challenger of Hershey is Parchment and not doubt Espanola, which for these war years has been an Ontario "ghost town," will become a worthy rival, too.

Paper Industry Executives Go to Europe To Help Start Up War-Closed Mills

C. A. GRONDONA (left), of Crown Zellerbach Corp., and ARTHUR G. WAKEMAN, of Kimberly-Clark Corp., now in Belgium on a mission for the U. S. Army. They have the title and rank of Colonels.

FOLLOWING victory in Europe, industry delegations have been touring that battlescarred continent under the aegis of the army. In the public eye have been such groups as newspaper publishers and a bevy of movie magnates. But not far behind was a mission from the ever-alert chemical industry.

And now comes word that the pulp and paper industry will have its own mission. According to a high army source, this latter mission will not be just a mere junket —it has a serious purpose in that its talents will be utilized in assisting the European paper mills to get back on a production basis. This will serve to take them off relief and put them on a self-sustaining basis, and, incidentally, may cool off the Communists.

The U. S. Army also has a purpose of its own—it wants huge quantities of all kinds of paper products —greaseproof and other wrapping, paper cups, etc.—for shipping equipment home or to the Pacific and for re-deployment of the military forces. Even book paper is wanted for instructional printing for police troops and reorientation of troops changing theaters of operation. Instead of shipping paper from the United States for this purpose, the army hopes to obtain its needs largely in Europe.

According to army sources, the paper mission will concentrate on Belgium, with headquarters in Brussels. Already there—arriving via Paris—is Charles A. Grondona, until recently in charge of Crown Zellerbach Corp.'s New York sales office and former manager of its Carthage, N. Y., mill. Facial tissue and tissue and towel specialties are made at Carthage and these were particular interests of Mr. Grondona. He also was in charge of pulp sales in New York. But he is well-grounded in all phases of paper production and marketing, and his all-around "know-how" should be of value in Europe.

By the time this is published, a second member of the mission, Arthur G. Wakeman, coordinator of expansion in the Kimberly - Clark Corp., and former production manager of Fox River Paper Co., is also expected to be quartered in the Belgian capital with Mr. Grondona.

During this month, one or more additional paper industry experts are expected to join this mission.

Mahler on Mission

The program abroad for the army was set up by Ernest Mahler, executive vice president of Kimberly-Clark Corp., and president of the Institute of Paper Chemistry at Appleton, Wis. Mr. Mahler was active in France at first. Now he is still serving abroad on another kind of mission as a member of the U. S. Reparations Commission and his travels have taken him to Russia.

According to a government official in close touch with paper industry affairs, a similar attempt to obtain production of needed paper for the army in France ran into some difficulty. This may have caused the shift to Brussels.

Representatives of the paper industry abroad all carry temporary ranks of colonels in the army—as do other civilian on similar missions. The status of colonel gives them necessary priorities for accommodations in traveling, in hotels, at mess, etc.

The tentative program in Brussels is for 90 days but members of the mission may be abroad an entire year.

Mr. Wakeman has had previous experience abroad, having gone to England during 1944 on a mission for the War Production Board. He left the Fox River Co. in Feb. 1942 to join the WPB and became director of the old Pulp and Paper Division in Sept. 1942. When the Forest Products Bureau was created in October 1943, with Paper, Paperboard, Lumber, Containers and Printing - Publishing Divisions, Mr. Wakeman became consultant to the bureau director. He went to England in the spring of 1944 and on his return joined Kimberly-Clark. He is a 1921 graduate of Massachusetts Institute of Technology.

Mr. Grondona is a graduate of Stanford University and is an engineer. He was a superintendent at the big Crown Zellerbach kraft mill in Port Townsend, Wash., before being transferred to Carthage. Early in the war he was transferred to the New York Crown Z office, where he was in charge during the period that H. O. Nichols served in Washington as chief of the coarse papers branch of the Paper Division. Mr. Nichols recently returned to his New York post.

France Will Get Swedish Pulp and Paper

An official report from Stockholm states that Sweden and France signed a trade treaty in Paris in late June, under which Sweden will supply $12,500,000 worth of wood pulp to French mills.

Also, the Swedes will supply France with $5,000,000 worth of paper.

France will provide Sweden with chemicals, textiles and wines, and the Swedes, in return, will supply prefabricated houses as well as pulp and paper.

Sweden will give France credit for one-third of total Swedish exports of $37,500,000.

SWEDISH PULP--More About Imports And Some Comparisons of Freight Rates

SPECULATION was still lively as this issue went to press on how much Swedish pulp will be coming into the United States in the next few months or the next year.

A great deal of significant material on the subject, gathered independently by PULP & PAPER INDUSTRY editors in various important industry centers and published in our June issue, caused considerable comment among operators, carriers and other groups directly affected.

Meanwhile, Benton R. Cancell, director of the WPB Forest Products Bureau in Washington, announced that the U. S. will not authorize any imports of newsprint from Northern Europe until the minimum essential needs of European countries are met. However, he said, purchases of such residual supplies of newsprint as may become available will be permitted.

The mills in the U. S., according to informed sources, now may expect to get about 200,000 tons of Swedish pulp during the third quarter, which is somewhat higher than the figure predicted just before shipments began. Pulp imports for the forthcoming 12 months may run over 600,00 tons but is unlikely to reach the much-advertised 1,000,000-ton figure.

A significant statement made by Mr. Cancell at the July 5 meeting of the Combined Raw Materials Board (made up of U. S., British, Belgian, Danish, French, Dutch and Norwegian members) is that Swedish pulp shipments would gradually relax with the withholding of pulp from integrated producers.

It was decided that problems of shipping and supply in Stockholm and London would be examined in early July by Mr. Cancell, L. J. Walinsky and E. A. Holmes for the Combined Raw Materials Board. Mr. Cancell is chairman and Mr. Walinsky is secretary of the pulp and paper group of the board and Mr. Holmes is Britain's deputy paper controller.

First Swedish Pulp

The Swedish ship Sparreholm of the Swedish-American-Mexico Line, out of Goeteborg, was the first ship to arrive in the United States with pulp from Europe since the war began in 1939. It docked in New York June 25, carrying about 3,000 tons of pulp of rayon quality. It also carried high quality steel and this was an indication that the need for Swedish iron and steel in the war will limit space available for pulp.

A second Swedish tramp steamer with a reported cargo of 8,000 tons of paper grade pulp—the first shipment of that quality pulp in six years—was due in New York in mid-July.

In our last issue, we carried the announcement of a reduced freight rate for the Swedish pulp.

The rate announced by the War Shipping Administration is $8 per 2,240 pounds (a long ton) of pulp stowed up to 55 cu. ft. per ton. Sweden surrendered control of her shipping to the Allied Shipping Pool but was granted this freight rate concession—a reduction of more than one-third—after the Office of Price Administration refused to allow the Swedes a higher-than-ceiling price for their pulp in the United States.

ERNST MAHLER, Executive Vice President, Kimberly-Clark Corp., who set up U. S. Army's program abroad for paper production and is now serving as member of U. S. Reparations Commission. Current travels have taken him to Russia.

Comparison of Freight Rates

It is interesting to compare this freight rate for the Swedes with shipping costs for U. S. and Canadian pulp exporters.

Pulp shipped from Pacific Coast mills to New York goes at the rate of $13.50 a ton and then at $24.14 per ton from New York to Brazil (for a 50-cu. ft. long ton). This makes a total of $37.64 as against total charge from the Swedes of $29. The rate for Canadian pulp out of New York to east coast of South America—$13.50 per ton plus 43% surcharge.

There have been no ships available for shipping west coast pulp to South America, but it is now learned that the War Shipping Administration was to make two ships available on Puget Sound during this month. This may lead to wiping out the disadvantage now faced by Pacific Coast pulp producers.

Maximum domestic freight allowance on American wood pulp is $13.50. The Swedes are allowed a maximum of $7.00 freight on allowance (they absorb to inland users). Under OPA's Revised Maximum Price Regulation 114, amended on June 14, where inland freight of Swedish pulp exceeds $7.00 per ton on pulp from 50 to 80% air dry, the excess may be added to the ceiling price. Comparatively this may not seem so good for the Swedes but they are reported well satisfied. Reports of objections by Swedish mills to the price ceilings were received in New York import offices.

An official report from Sweden this month was that Swedish fuel shortages, which threatened to limit use of wood for pulp and hamper pulp mill operations, as well, would be eased under a trade agreement with Poland. Sweden would receive 1,000,000 tons of coal and 200,000 tons of coke.

The Swedish official news agency also reported that only 30 Swedish ships have been licensed to carry wood pulp and iron and steel, confirming a report published in this magazine last month. Coal and staples will be return cargoes. Many Swedish ships will be required by the Allied Shipping Pool for relief and rehabilitation cargoes.

Pulp Allocations Up

Most cheering news of the month for the non-integrated paper mills of the United States is the extra five per cent of pulp allocated for the third quarter, exclusive of Swedish pulp.

PULP & PAPER INDUSTRY, on the basis of reliable information, is able to reaffirm the prediction which was made in the May issue of this magazine—that U. S. pulp allocations may very likely be lifted after the third quarter of 1945.

Segment allocation of pulp already has been dropped, except for those amounts reserved for wrapping paper, grocery bags, multi-wall bags, containerboard and waterproof paper. Otherwise the paper mill may use pulp to make any grade or types of paper.

France Fails To Get Paper-Pulp Requests

Although Emile Gaillet, Director General Groupement d'Importation de la Papeterie, returned to Paris this month in seeming good humor, well informed sources were of the opinion that France did not come off too well in her efforts to obtain concessions either for her paper industry or for pulp and paper exports from the U. S.

Printers and other consumers of paper in France operate under a ration point system and must turn in ration coupons in return for paper. All financial transactions of the private paper companies must be cleared through the French government. In France one ton of pulp makes three tons of paper, naturally of inferior grade. Costs of pulp are extremely high and pulp costs are hardly considered at the present time under the stress of the French economy, rehabilitation, black markets, and other problems—the main idea being to get people into production and to make paper and paper products so that other business channels may be cleared of the debris of war and occupation.

Like other countries across the water, France is terrifically handicapped by lack of coal and the paper industry is especially hard hit.

Chlorine Limitations Partially Removed

Brightness limitations of various grades of paper and panel board, attained by the use of chlorine, have been removed by the War Production Board.

Importation of Swedish pulp "eliminated" the need for the controls, it was stated.

The Canadian pulp and paper industry made a similar move, effective July 1.

Chlorine used as a bleaching agent in papermaking, will continue to be allocated under Order M-19.

Clark Everest Predicts Paper and Pulp Production

A postwar annual U. S. paper production "requirement" of 17,400,000 tons is predicted by D. Clark Everest, president and general manager of Marathon Corp.

Mr. Everest did not specify any particular year but presumably referred to the first year in which restrictions are generally lifted. His figure compares with 1944 production of 17,182,804 tons and a record high in 1941 of 17,762,365 tons. It also may be compared with the 1947 forecasts of 20,070,000 tons by Clifton Housley, coordinator of statistics, Forest Products Bureau, War Production Board, and of 19,221,000 by the Pulp & Paper Unit, Department of Commerce.

In presenting "a preview of the industry following V-J Day," in an address which he made before the Chicago Professional Paper Group on June 18, Mr. Everest made these additional predictions (annual basis):

Paper for domestic use — 17,000,000 tons.

For export—400,000 tons.

U. S. pulp requirements — 13,150,000 tons.

For paper production—12,400,000 tons.

For rayon and non-paper use—550,000 tons.

For export—200,000 tons.

U. S. pulp production — 11,000,000 tons.

Pulp from Europe — 1,200,000 tons.

Pulp from Canada—950,000 tons.

Mr. Everest's Reason

In his talk, Mr. Everest conceded that his paper production figures were "somewhat less than most people are forecasting." While conceding that paper requirements by and large follow the level of economy and that we may anticipate a long period of prosperity, he cautioned:

"As the economy steps up and money becomes available for the purchase of durable goods, the associated use of paper decreases per unit of dollar expended." After hitting slightly higher levels for two or three years, the national gross production, he estimated, would range from $100- to $110,000,000, and mean a consumption of 1.5 to 1.7 million tons of paper.

Here are other predictions by Mr. Everest:

Paper Grades

A greater shifting of grades in the next decade than in any previous one. "Except for some grades such as newsprint and rag content papers, our pre-war grades will be unrecognizable ten years hence."

Kraft board will make inroads on jute. Box grades will require more virgin pulp, less waste paper.

D. CLARK EVEREST: "As economy steps up, use of paper decreases per unit dollar spent."

"With more bleached sulphate pulp in the South and mid-South, I visualize a regional shift in manufacture of book, No. 4 bond, tablet, envelope, etc."

Machine-coated paper will become very important. With more bleached sulphate pulp and bleached groundwood, filled book papers "may have a rough time."

No increase in sulphite papers.

Wood — By Regions

"With the need for lumber for rebuilding the outside world and the housing programs in this country, we are faced with great competition for the available supply of men who will go into the forests. There has been some mechanization in the industry which may help but there are also millions of young men who have been out of the logging locations for several years. They have seen a lot of country and it is questionable whether they will be content to engage in that type of work.

"With the new plants contemplated in the South, the situation there becomes more complicated. If there is a building boom, the small portable sawmill, of which there are 15 to 18 thousand in the southern states, will be a constant menace to pulpwood production.

"On the West Coast the timber is pretty well allocated. The only way I see to increase that supply is by the utilization of small timber which will be logged in advance of their regular operations in big timber and which has heretofore been broken up and rendered useless through the felling of the larger timber. A study of this procedure is under way. Another help would be the liberalization of the policy of the Forest Service in selling timber and by blocking up of isolated second growth stands which can be put on a sound basis and justify the investment necessary to produce pulp. A good process for manufacture of pulp from Douglas fir would also help to loosen up this situation.

"The supply in the Northeast and in the Lake States region is diminshing and even with the efforts now being made in reforestation and approved forestry practices there is bound to be a gap in the production of pulpwood before the productivity of these regions can be built up.

"With an estimated demand for 17,000,000 cords of pulpwood this year, the minimum rate at which I believe the demand will continue for a number of years, you can readily realize that the production of wood becomes our most important job and on it depends the success of the industry and its ability to meet the demand for pulp, paper and paper board."

Sweden

"There has been much discussion of a flood of imports from Sweden. I cannot get excited about this situation as far as having an adverse effect on this industry. As a matter of fact, we need all the pulp we can get from overseas."

Swedish pulp will be required in Europe and South America in large quantities and limited availability of shipping space will keep U. S. receipts of Swedish pulp in the third quarter of this year to around 100,000 tons.

"Owing to fuel shortage in Sweden, there is a possibility of the government taking over from 25 to 50% of present pulpwood inventories for use as fuel which may cut from 225,000 tons to 125,000 tons of Swedish pulp per month for export. Presently there is a chlorine shortage in Sweden and this may affect the Swedes' ability to continue delivery of bleached pulp until this shortage is relieved."

Russia

"Russia, in my opinion, will become an industrial nation of no small proportion. Prior to the war, through its compulsory educational program, it was making strides percentagewise in its increased use per capita. This program continues at an even greater pace and there is no question but that its conversion from the manufacture of war material to consumers' goods will mean a terrific increase in the use of paper and paper board for packaging. They know all about corrugated and solid fibre boxes and other items and my thought is that the Soviet Union will show the greatest increased use per capita within the next ten-year period of any country on earth including our own."

Germany

"Germany has also lost much of its pulp producing capacity, particularly in Aschaffenburg and in the Waldhof group of mills. Probably many other paper mills have been damaged in other areas. Another phase of Germany's plight is the great overcutting of forests during the war which means much less cutting over the next ten years in order to re-establish their cycle of cutting on a sustained yield basis. There is also the probability of considerable labor shortage in the industry postwar."

Finland-Norway

"Finland has lost a substantial percentage of productive capacity. There has been severe damage and over-cutting in its forests and finally in all probability its whole exportable output will be taken as reparations by Russia. Norway has suffered severely in loss of timber and in damaged plants."

Industry Officials and Leaders Praise P & PI's North American Review Number

THE most complete analysis of the future pulpwood resources of the continent ever published, and the other outstanding reference material which appears in The North American Review Number of PULP & PAPER INDUSTRY has drawn high praise from prominent persons in the industry.

There are still copies of the issue available.

The 176-page book, with photographs, maps, charts and other illustrations on every editorial page, can now be included free with a subscription order.*

E. W. Tinker, executive secretary of the American Paper & Pulp Association, in describing the book as "almost a must requirement as reference material for some time to come," expresses the view that forest-using industries have "reached a turning point in their approach to the basic problem of future wood supplies."

The president and general manager of one of the principal Wisconsin paper manufacturing companies also praised the North American Review Number highly. In a letter to Miller Freeman, president of PULP & PAPER INDUSTRY, he said:

"I wish to extend my congratulations on your May issue (North American Review Number). You have certainly done a might fine job in getting all the pertinent information relative to the pulp, paper and paperboard industry into one volume. This is indeed a very interesting issue and really constitutes a statistical handbook of great value. I again congratulate you and your staff on its preparation."

Praise also came from W. Le Roy Neubrech, chief of the Pulp and Paper Unit, Bureau of Foreign and Domestic Commerce, U. S. Department of Commerce, who wrote:

"We have just received our copy of your May, 1945, issue of PULP & PAPER INDUSTRY containing your North American Review. . . . It is very obvious that you have put together an excellent array of information and facts on the industry. I shall be particularly interested to review your special material on pulpwood resources."

Mr. Tinker's Letter

The letter which Mr. Tinker wrote to the editor follows:

"May I congratulate you upon the May issue of PULP & PAPER INDUSTRY and the North American Review it so adequately covers.

"The statistical information contained in this number will make it almost a must requirement as reference material for some time to come. Information available to me indicates that the forest products industries have reached a turning point in their approach to the basic problem of future wood supplies. Any thinking man who analyzes the situation in the United States must recognize that the key to forest land use lies in the economic utilization of forest products. Moves that discourage such utilization are certainly not in the public interest because we have an abundance of forest land and the use of that land for forest production will in the long run only be had through economic enterprises.

"In my opinion if the forest products industries are stimulated, protected and encouraged, the forest land problem of the United States will be on a fair way to solution. Any conclusion based on the assumption that the United States must become a heavy importer of forest products represents a defeatist attitude toward a question that is in the process of solving itself, that to me is unthinkable at this time when matters of social and economic welfare are so much in the public mind.

"I am stirred to write you because because of the wealth of material with regard to forest resources you have published and because I believe so strongly that it is necessary to sell the philosophy of greater and more intensified use of forest products as the proper solution of the forest land problem.

(signed) E. W. Tinker
Executive Secretary,
American Paper and Pulp Assn."

R. H. RAUSCH, who became a Vice President of Scott Paper Co., Chester, Pa., in transaction announced last month by PULP & PAPER INDUSTRY, when Scott acquired all assets of Automatic Paper Machinery Co., of which Mr. Rausch was President. Stockholders of the latter company acquired more than one-sixth of Scott common stock.

Mr. Rausch was a founder of the Cut-Rite household waxed paper line and other specialties made in New Jersey and Ohio, to be distributed after Aug. 1 by Scott.

*If you wish to receive the North American Review Numbers for 1945 and 1946 or send them to a friend, tear out the form below and mail it to the address as given:

To PULP & PAPER INDUSTRY
71 Columbia St.,
Seattle 4, Wash.

Please start a one-year subscription to PULP & PAPER INDUSTRY, which will include a copy of the 1945 and 1946 North American Review Numbers to—

Name .....

Address .....

City-State-Country .....

Enclosed is check..... Send bill to above named..... or,

Send bill to .....

(One year subscription—$4 in U. S.; $4.50 in Canada; $5.00 in Other Countries.)

KVP'S NEW SULPHATE PULP MILL

—Paper Products of KVP

Will Insure That Company's Position

TWENTY-EIGHT years ago a young engineer named R. A. Hayward, fresh from college, went to work at Espanola, Ontario, in the old Spanish River Paper Co.'s newsprint mill. His boss was R. B. Wolf, who later was to become a key figure in the Weyerhaeuser organization on the West Coast.

Young Hayward did not remain long in Espanola. Soon after the United States entered the war he joined the Ordnance Corps of the Army, and when the war was over, instead of going back to the mill in Canada, he started work with Mr. Wolf, who was entering the consulting engineering field in pulp and paper.

But from the standpoint of this article, the important fact is that R. A. Hayward did ultimately return to Espanola. He returned there a few months ago as president of the Kalamazoo Vegetable Parchment Co. of Michigan, with great plans for developing Espanola into a pulp producing center. And the plant which he chose as the base of operations for KVP in Canada and for an extensive program of remodelling and expansion was that of the old Spanish River Co., where he had broken in as an engineer back in 1917.

Mr. Hayward has launched the Espanola project with characteristic enthusiasm. "This is an ideal setting for a pulp mill," he told a representative of PULP & PAPER INDUSTRY during a visit to Espanola recently. "We intend to make it a genuine, model pulp-making community."

Already there is an abundance of evidence that Mr. Hayward's ideals for Espanola will soon materialize. Reconstruction of the mill, erection of new buildings, assembly and installation of new machinery and equipment are being rushed ahead, and when this essential phase of the program is completed, the company will concentrate on improvement of the townsite. Espanola already has an excellent hotel, which KVP has recently supplied with new furniture, and many of the houses built some years ago are being repaired and put in shape for occupancy.

Revival of Ghost Town

Entry of Kalamazoo Vegetable Parchment Co. represents a real revival for Espanola, for the little town at the bend of the Spanish River has been idle ever since Abi-

Our Cover Picture - -

● Shows the principal operations of Kalamazoo Vegetable Parchment Co., and the model city of Parchment, built on the outskirts of Kalamazoo, Mich.

Jacob Kindleberger, now the chairman, was the organizer and first president of KVP in 1909 and his ideas and philosophy are expressed in the mill and the city, in the company's business policies and its public and labor relations. His most ardent disciple, Ralph A. Hayward, president since 1936, joined the company in 1924 as general manager.

KVP started parchment and waxed paper production as a converting mill and also started printing in the years before its No. 1 Paper Mill was built, in 1917.

In 1923 it began making waterleaf for parchment and wax. Five years earlier the No. 1 mill was built with two machines, one 104-inch trim machine for waxing stocks and a 163-inch trim Fourdrinier. In 1923, Mill No. 2 was built and machines were gradually added until there were six paper machines in all. The latest Yankee was put into operation in 1943. The new mill has two 148-inch trim Fourdriniers (one Beloit and one Bagley & Sewall) and two 126-inch trim Yankees built for bread wrapper and similar papers.

Meanwhile, converting and printing was gradually expanded until now the company has 40 printing presses operating night and day, five parchment machines, 12 waxing machines and 18 re-winders.

KVP is truly one of the outstanding important and highly essential wartime industries. Lend-lease and overseas shipments have accounted for 75% of its production. Mill No. 1 has a 24-hour capacity of 60 tons; Mill No. 2, of 175 tons.

Its wartime products include postcards and papers sensitive to invisible inks, camouflage papers, gas detector papers, ordnance wrapping paper, and parchment and waxing papers, of course, are highly critical in the demand for adequate wrapping for shipments in all kinds of climatic conditions to reach the far-flung war theaters. All parchment excelsior from the mill is used to cushion delicate military and navigation instruments.

KVP at Parchment now has about 1300 employes; normally it employs 1600 persons.

KVP also has converting plants for waxing papers and specialties at Sturges, Mich.; Philadelphia, and Houston, Texas.

tibi Power & Paper Co., which amalgamated with and absorbed the Spanish River organization in 1928, closed down the operation a couple of years later. Espanola is back on the map again now.

Kalamazoo Vegetable Parchment Co. is one of the country's biggest manufacturers of paper specialties, particularly in the food protection field. But in the past it has always been entirely dependent on outside sources of supply for pulp. Importance of building up his own pulp production facilities impressed Mr. Hayward as sound business. The company looked around for sites and eventually chose Espanola, which also has access to some 5500 square miles of timber stretching back into that section of Ontario north of Georgian Bay on Lake Huron 40 miles west of Sudbury and largely tributary to Spanish River. The Espanola properties were purchased in January, 1943.

The Espanola mill will produce about 200 tons of bleached and semi-bleached sulphate pulp daily when it gets into full operation by about July, 1946. This output will supply a substantial part of the Kalamazoo requirements.

The company will continue to buy about 40% of its pulp from outside but Espanola's 200 tons will give the parent company much greater control over its supply than has been possible in the past.

Cost of getting Espanola into condition is estimated at about $4,500,000, although the entire enterprise probably represents an outlay of double that figure.

Much of the old Spanish River-Abitibi equipment has been dismantled or scrapped. In its newsprint producing days Espanola had an output of 400 tons daily and operated six machines. Obviously, the new owners will not require all these; but there are some features of the old setup that will come in handy, such as the fine big stacker and pulpwood conveyor which were installed shortly before Abitibi closed down and which were hardly used.

KVP will operate woods camps at Cartier, Shean, Sultan and Fingal, all to the north of Espanola and reached by tributaries of the winding Spanish River which flows right past the mill and whose falls provide the power for the operation.

Personnel at Espanola

Chief representative of the company at Espanola is E. Norval Hunter, assistant to the president. A. H. Burk is woods manager; D. W. Gray, logging engineer; G. M. Stewart, woods superintendent; R. E. Simkins, resident engineer; L. A. Bailey, purchasing agent; L. C. M. Palmer, accounting supervisor; S. W. Gardiner, master mechanic, and J. F. Boucher, chief electrician. P. D. Dalton is construction manager, with H. S. Shaw, construction superintendent.

Messrs. Hunter and Burk joined KVP from Great Lakes Paper Co., which they served at Fort William. Mr. Gardiner spent 12 years with Howard Smith Paper Co.'s fine paper mill at Beauharnois, Quebec.

The new owners are incorporating many new features in the Espanola production setup. One of the interesting installations is the 500-foot conveyor which will extend from the chip bins to the five digesters. The conveyor, designed by

Fateful Speech--

RALPH A. HAYWARD, President of KVP. Photo taken last month outside mill office at Espanola, where he now spends part of each month.

In 1923—at the age of 28—R. A. Hayward became assistant professor of chemical engineering at the University of Michigan but he lasted only two years at it. Jacob Kindleberger, then president of KVP, heard the young pedagogue make a talk at a paper meeting and was so impressed that teaching—as a profession—ended very abruptly for the young man.

In 21 years with KVP, Mr. Hayward has had ample opportunity to carry out the theories he expounded in that fateful speech. Mr. Kindleberger hired him as general manager; in 1928 he became a director; in 1930, first vice president, and in 1936, president.

Born in St. Clair, Mich., he went to high school in Ashtabula, Ohio, to college at Ann Arbor, where he later joined the faculty, and is now a regent of the University. As mentioned in the accompanying article, upon graduation in 1917, he became resident engineer at the Spanish River Pulp & Paper Co., under R. B. Wolf, then its manager. Two years later he joined the consulting engineering firm of R. B. Wolf Co., and remained there until his return to Ann Arbor in 1923.

R. B. Wolf went west where he founded and managed the pulp division of Weyerhaeuser Timber Co. It is interesting to note that as KVP expanded under Mr. Hayward's direction, it became a principal market for the new Weyerhaeuser pulp mills, and at one time took the entire pulp production of the Everett, Wash., pulp mill.

In the den of his hilltop home in Parchment, Mich., Mr. Hayward has photographs of the men he regards as his severest critics, best friends and guiding lights of his career—the late W. J. Lawrence; Mr. Kindleberger; Prof. A. H. White of Michigan; Mr. Wolf; Dan Quirk and Arthur Baldwin, president, Newton Falls Pulp & Paper Co.

His principal diversion is his 22-meter sloop-rigged Swedish sailboat. He has been a boat enthusiast all his life and at 16 was wheelsman on Great Lakes ships, of which his father was skipper. Joining with him in his sport are his wife, the former Marion MacGregor, and their son, John.

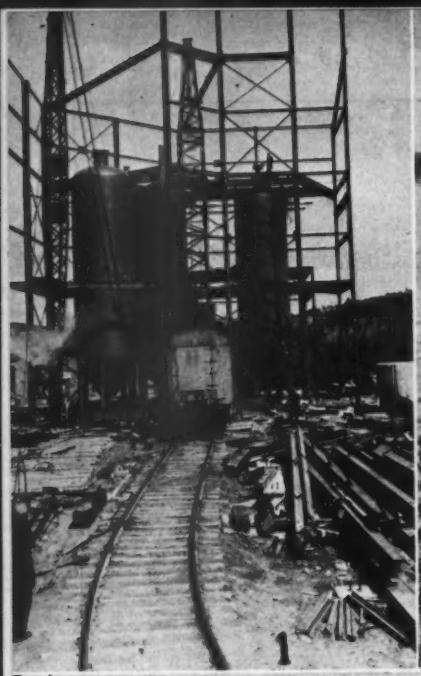
Everyone in the paper industry who knows Mr. Hayward is also aware that he is a staunch Republican. He served a year as president of TAPPI.

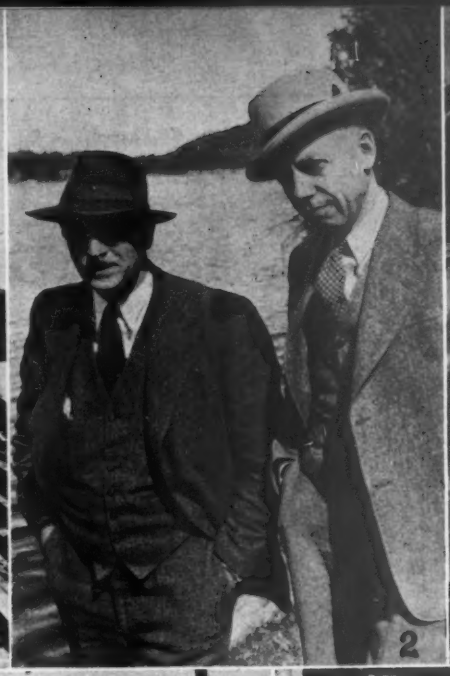
In a recent informal interview with PULP & PAPER INDUSTRY at his Parchment, Mich., office, he made this observation on "the framework of thinking" within which the Espanola expansion was projected:

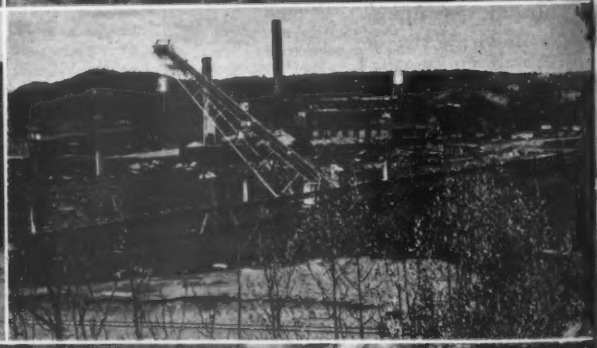
"I do not think it will be possible to substantially increase pulp production in this country and Canada until practically the end of the Japanese war. I believe that demobilization will be slow and that most men will find jobs in industry rather than going into the woods.

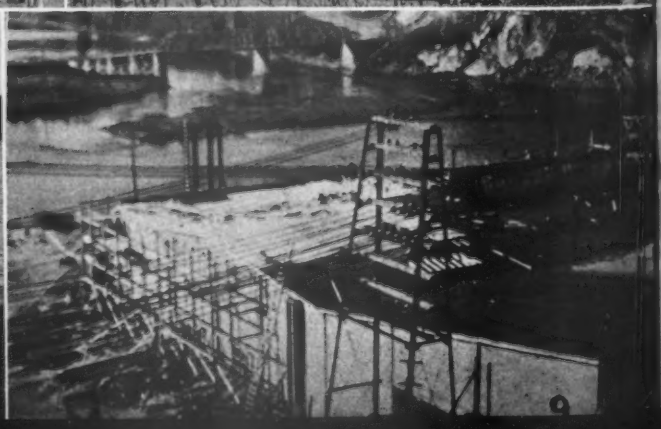
"It is going to take about two years to completely build back inventories of both pulp and paper so that I see no reason why the pulp industry should not operate through this period at the maximum capacity they can produce with the labor that will be available. This probably will be something short of full production.

"In the postwar period, I believe the consumption of paper is going to be high throughout the world and the pulp industry should enjoy a full market for several years—at least until further expansion overtakes what is the enlarged demand."









ON OPPOSITE PAGE ARE VIEWS of new modern sulphate mill being built at Espanola, Ont., by Kalamazoo Vegetable Parchment Co., utilizing some facilities of old Abitibi newsprint mill. Also shown are KVP executives at Espanola.

(All photos by PULP & PAPER INDUSTRY.)

1. Digesters being installed. 2. A. H. BURK, Woods Manager (left), with E. NORVAL HUNTER, Assistant to the President. Both were formerly with Great Lakes Paper Co., Fort William, Ont. 3. Bleach plant under construction.

4. Commencing construction of new sulphate mill. 5. Left to right: H. S. SHAW, Construction Superintendent; SID W. GARDINER, Master Mechanic, and P. D. DALTON, Construction Manager.

6. Espanola mill from west, showing section of power plant at left and Spanish River Falls in background. Main buildings on higher ground to right. 7. Espanola mill from south. Stacker, in foreground, is movable along the tracks shown.

8. KVP booming grounds above Spanish River Falls. Logs are boom sticks brought from British Columbia. 9. Electrolytic plant under construction. Highway bridge over Spanish River in background.

OTTO C. SCHOENWERK, 3240 Lake Shore Dr., Chicago, Consulting Engineer for the new KVP Mill rising at Espanola, Ontario.

Otto Schoenwerk, consulting engineer associated with various Weyerhaeuser projects, passes through an eight-foot steel tube with walk-way alongside the rubber-belt which transports the chips. This inclosed tubular construction, built by Dominion Bridge Co., eliminates the necessity of building roof and the cost of snow-loads in winter.

The pulpwood will be fed into Waterous barking drums before proceeding to the chipper.

Stock from the blow tanks will go to the washers and then be pumped to the screen room, which is being placed in a section of the building formerly occupied by Abitibi's newsprint machines. Flat screens have been installed with modern set of felt rifflers ahead of them.

Six-stage continuous and batch bleaching will be carried on at Espanola.

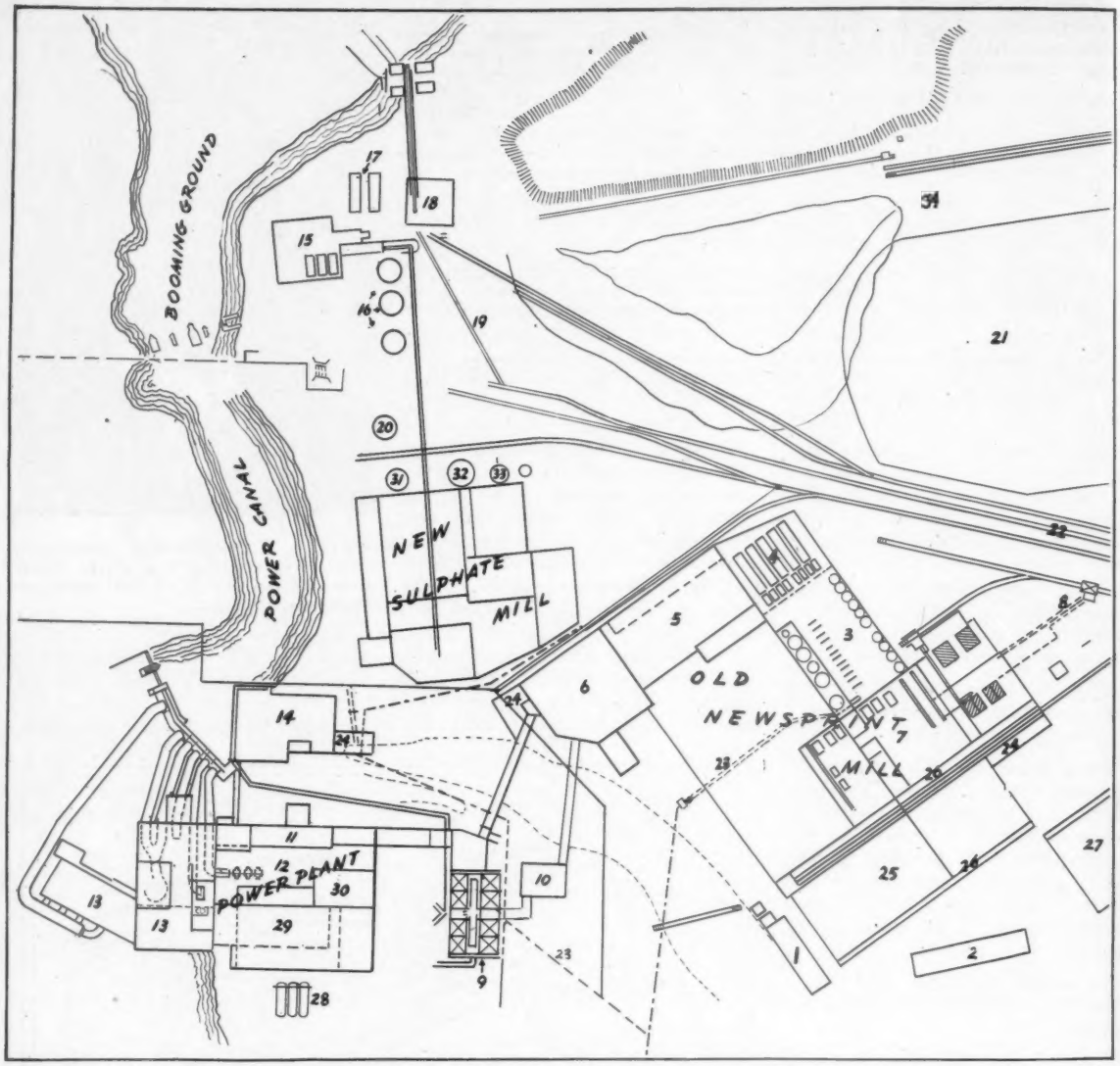
Two of the old newsprint machines have already been dismantled. What use KVP may have for the others has not yet been determined, but one will be converted into a pulp dryer. However, the company will have a 160-inch Kamyr machine in operation by next fall and this is expected to handle practically the entire output of the mill. The Kamyr will be equipped to produce pulp for shipment practically 80% air dry. The entire output will be sent to the parent company's paper mills at Parchment, Kalamazoo, Mich., about 450 miles to the south.

In the boiler house as operated by Abitibi there were 14 boilers. KVP has removed and dismantled 10 of them. The four most modern boilers have been retained and reset. Two of them will handle bark from the barking drums for refuse disposal and the other two will be equipped with stokers as an ordinary unit. A large extension is being made to the boiler house to accommodate the use of pulverized coal. The boiler house will also have an electric boiler which will utilize any surplus power available during high-water periods of the year. All power so required will be supplied by the Spanish River.

At the dam there are six penstocks. One of them is hooked up to four 1250 kilowatt water-wheels and these will be used as a standby plant. The other five penstocks supplied water wheels which were directly connected to batteries of grinders. All but three of the grind-

THIS MAP SHOWS relative locations of parent mill of Kalamazoo Vegetable Parchment Co., at Parchment, Mich., and the new mill rising at Espanola, Ont., which will supply the former with about 60 per cent of its pulp requirements. It is 450 miles by rail and road between Parchment and Espanola. A water route also leads to the Michigan coast.

Trees above Espanola show the general location of that mill's wood supply. Sudbury is main railroad junction for Espanola. Cartier and Sultan, shown north of Espanola, will be sites of KVP wood camps and others in that region also will be established.



THE ABOVE MAP SHOWS THE RELATIVE POSITIONS of the new sulphate pulp mill being built by KVP on the Spanish River and the power plant and the old newsprint mill installations of Abitibi Power & Paper Co. The accompanying article gives a description of the sulphate mill and the use that will be made of present installations.

1. Office	8. Coal Conveyor	15. Clippers	22. R.R. Tracks	29. Cell Room
2. Woods Office	9. Filter Plant	16. Chip Storage	23. Sewers	30. Cell Repairs
3. Bleachery	10. Pump House	17. Barkers	24. Docks	31. Lime
4. Screen Room	11. Screens	18. Slasher	25. Finishing Bldg.	32. Salt Cake
5. Old Beater Room	12. Grinders	19. Refuse Conveyor	26. Shipping Docks	33. Tower
6. Testing laboratory	13. Power Plant	20. Oil Storage	27. Paper Storage	34. Wood Conveyor
7. Pulp Machines	14. Salt Storage	21. Wood Storage	28. Chlorine Storage	

ers have been removed and these are driven by one of the water-wheels.

A second water-wheel is being overhauled to be used for a D.C. generator of 1750 kilowatt capacity which in turn will be employed in making the mill's own chlorine and caustic used in the bleaching process. This, of course, will be regularly in operation.

Three of the water-wheels have been taken out and the penstocks which served two of them hooked to a new A.C. generator of 10,000 h.p., which will serve as the main power unit for the plant.

Full utilization of these power facilities will depend to some extent on the prevailing water supply.

For its bleaching operations the company will bury all its salt and convert it to brine.

H. P. Acres & Co. of Niagara Falls, Ont., is advising KVP on its hydro-electrical installations.

Digesters in Place

At the time the mill property was visited by PULP & PAPER INDUSTRY early in June, foundation work for the sulphate mill was being laid, and the chipping plant was about to be erected. The digesters were in place, but not yet housed. The old newsprint machine building was being remodelled to some extent and the bleach plant built in as an entirely new operation. Good progress was being made on completion of the electrolytic plant. Another three or four months will find many new buildings up. Typical construction is reinforced concrete, with structural steel frames, concrete walls and haydite roof. All sash are factory-type steel.

All structural steel has been supplied by Dominion Bridge Co., which is also installing the digesters and blow tank.

Recovery furnace and new steam generator are being supplied by Combustion Engineering Co.; steel tankage by Horton Steel Co.; causticizing equipment by the Dorr Co.; new water wheel and rotary lime kiln by the Allis-Chalmers Co.; washers for the bleaching plant by Sherbrooke Machineries, Ltd.

The Waterous Co. will supply the barking equipment, chip screens and chippers for the wood room as well as bleaching plant mechanism. Oliver washers for the pulp mill will be supplied by the E. Long Co.; and direct current generator for the chlorine plant will be supplied by Canadian General Electric, with Canadian Westinghouse supplying the A.C. generator to be connected to the water-wheel.

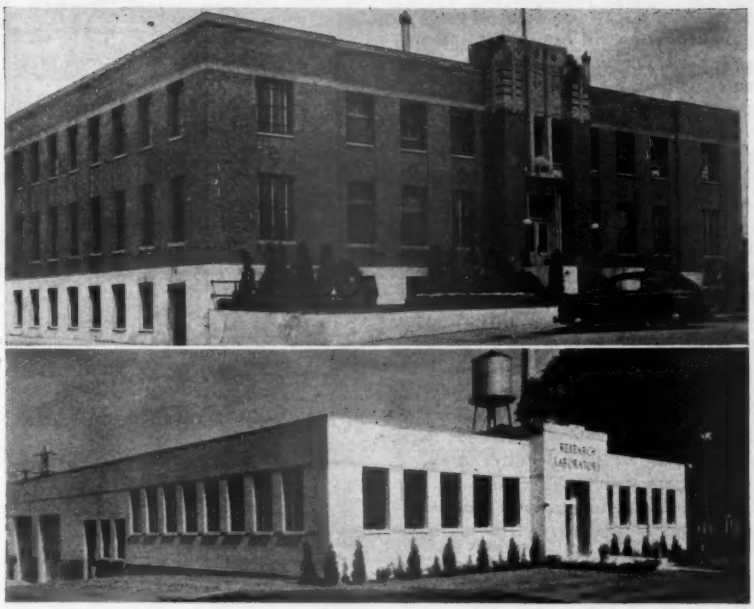
The company recently awarded a contract for the construction of a 35-mile road to Durban, but this will not be used for wood transport but for supplying the woods camps. The most distant camp is about 175 miles from Espanola. About 60,000 cords a year will be driven down the river from company camps, some of the booms having to be towed across 25-mile long Lake Agnew. In the narrower stretches the bag booms are forcibly tightened up by the use of ¾-inch cable lasher across the boom at various stages and drawn tight. Espanola will receive about 60,000 cords of wood by rail from various suppliers. The timber is fast-growing and reaches maturity in about 60 years. It is contemplated that jack pine and alder will be used, along with more common pulp species.

Wherever practicable, mechanized equipment is being used in the KVP woods operations, according to woods manager Harold Burk, who is a member of the mechanization committee of the Canadian Pulp & Paper Association, headed by Gordon Godwin.

Mr. Hayward is optimistic regarding the future of all paper markets, although he anticipates a levelling off in demand after the first two or three years of the post-war period. He says that in his opinion Sweden may become a fairly important factor in the pulp supply picture during the next few years, but in the long-term view he considers that most of the European production will be absorbed in Europe, especially if Russian consumption increases, as it seems likely to do.

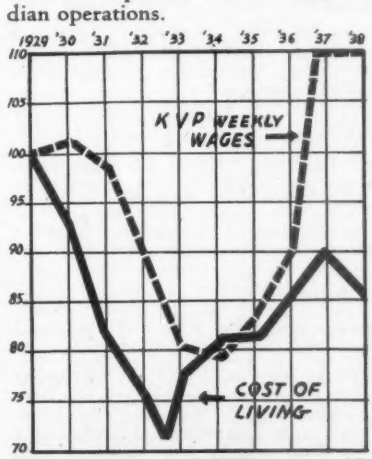
Mr. Hayward believes that pulp and paper mills in this country are now in a sounder competitive position, although some of the older, more obsolete establishments will probably have to give way to newer, more efficient plants. Of this latter trend the Espanola project is an excellent illustration.

The company plans to establish a Canadian subsidiary shortly, headed by Mr. Hayward, to provide a greater degree of autonomy in connection with the Espanola and other Canadian operations.



Above: MAIN OFFICE BLDG., Parchment, Mich. In nearest (left) corner of building is President Hayward's office. A. Southon, First Vice Pres. and Gen. Sales Mgr.; F. S. Libby, Manager of Paper Mills; J. C. Wood, Manager of Converting, and other executives have offices here.

Below: The excellently equipped Research Laboratory—one of the most recent in the entire industry. This was completed in 1943. Studies are made here on growth and effects of fungi on wrappers—just an example of the wide range of research made possible by extensive equipment. G. F. Des Autels, Research Chemist, has his office here and is in charge.



This comparison of KVP wages with living cost was published in a company booklet. The National Industrial Conference Board was credited as the authority.

Management Policy

KVP has a well established management policy and this was recently effectively enunciated in a brochure issued by the company entitled "Who Gets the KVP Dollar?" and written by Mr. Hayward.

"Some people think that the management of an organization rests entirely in one or two men," states Mr. Hayward. "It is true that final decisions have to be made and the authority for these final decisions has to rest with one or two men in the organization. However, these decisions have to be based upon the advice of a great many individuals, and actually all those people who take part in the planning or directing of the work are a part of management.

"Perhaps the greatest responsibility resting upon management is that of seeing that fairness and justice exist among the three principal factors of the organization, namely, the customers, the employees and the stockholders.

"First, the customers must be treated justly and fairly. They must receive their merchandise exactly as they want it and management must see that they pay a fair return for it.

"If the product is sold at too low a cost, the employees and the stockholders of the company would suf-

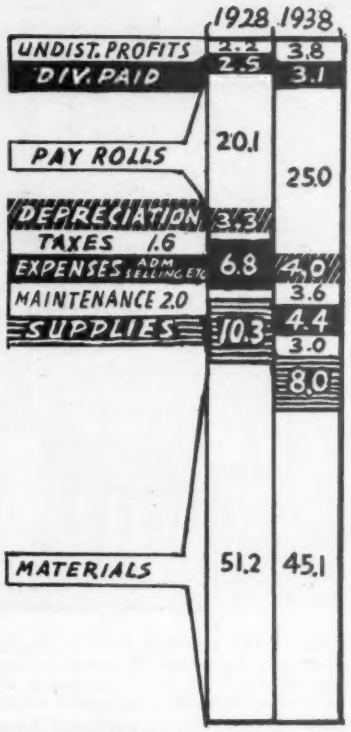
fer from it. If too high a price is charged, it would be unjust and unfair to them and, sooner or later, the business would be lost either by competition or by substitution.

"The employees should receive their fair share of the returns. If too much is distributed to employees, it must be taken either from the customers or the stockholders, and might interfere with the development of the company and the security of work for the future. If too little is distributed to the employees, it is unfair to them and again throws the machine out of balance. Likewise, the stockholders have the right to expect a fair return on their investment. If they demand more than a fair return, it must come from the customers or from the employees and someone will have to suffer from the greediness on their part.

"The operation of the business can be compared with that of a wheel. If all three parts of the wheel are in balance, the machine will run smoothly. If any of the three parts of the wheel get out of balance, the company is in for some rough riding and very shortly will shake itself to pieces.

"After the paper is manufactured and sold, and the money collected from the customers for the product, it is then the job of management to see that an equitable distribution is made of this money.

"The first disposition has to be made for materials. They have to be paid for promptly in order to maintain the credit of the company.



HOW THE KVP$ was divided up in 1928 as compared with 1938. War brought heavier taxes and payrolls.

"During the year 1938 we had to pay 45.1 cents of each dollar that we received for materials such as pulp, wax, chemicals, inks, etc. The next eight cents had to be paid for supplies which are similar to materials. They include coal, wrapping materials and other items of this kind. The next three cents had to be paid for maintenance materials; included in this group are replacement parts of machines, belts, lubricants, etc. The next 4.4 cents had to be paid out for selling and general expense. A large part of this is paid for selling commissions, for rental of offices, for traveling expenses, and for telephone, telegraph and postal expenses. The next 3.6 cents of the sales dollar went to the government in the form of taxes. The government imposes very heavy taxes on the operation of an industry. The next 4 cents of the sales dollar was set aside for depreciation. This money is used for the replacement of machinery as it wears out.

"In our company, as well as any other, machinery becomes obsolete, as a rule, before it is fully depreciated, so that this amount of money is hardly sufficient to take care of the replacement of machinery and buildings.

"If you will now total all the disbursements that have thus far been made, you will find that 68.1 cents of the sales dollar have already been paid out, and not a cent has been paid either to the employees or to the stockholders of the company. There is left 31.9 cents for distribution between these groups.

"In 1938 we distributed 25 cents to all employees of the company and 3.1 cents to the stockholders. This left 3.8 cents which was not distributed, but which was used for reinvesting in the producing equipment of the company in order to give them greater security in their present jobs, and in order to give the stockholders a greater security of the earning power of their investment.

"It is interesting to note that of the money distributed to the employees and to the stockholders, the employees got 89 per cent and the stockholders got 11 per cent."

NEWS OF *The Pulp and Paper Industry--*

10 Years Ago

Jacob Kindleberger, president of Kalamazoo Vegetable Parchment Co., mailed a letter to many people throughout the country in which he said: "We are not ashamed to belong to that dwindling generation which believes that salvation comes through oil, not leisure; through struggle, not through ease."

George S. Witham, Jr., former general supt. of Union Bag & Paper Co., joined Crown-Willamette Paper Co. in Portland, Ore., on a special assignment.

A Pacific Coast industry wage agreement was signed raising minimum wages from 45 to 47½ cents an hour, almost 18 per cent higher than the average for the U. S. industry.

President Lawrence Killam of British Columbia Pulp & Paper Co., appointed Andreas Christensen his assistant with technical supervision of the Port Alice and Woodfibre mills.

15 Years Ago

Hardy S. Ferguson was in Russia supervising construction of a large pulp and paper mill.

J. E. "Jack" Hanny, for over four years manager of the Crown Willamette Paper Co.'s West Linn, Ore., mill, became on June 1 the manager of the company's Camas, Wash., mill, succeeding Lyman Smith. C. E. Bruner succeeded him at West Linn. S. A. Salmonson became sulphite superintendent at Camas, and was succeeded at the corresponding position in West Linn by Jan Haugerud.

Fir-Tex Insulating Board Co., pioneering in the manufacture of a new type of insulating board, completed in June its new $2,500,000 plant at St. Helens, Ore.

M. J. Scanlon, of Minneapolis, was elected president of Powell River Co., succeeding his late partner, Dwight F. Brooks, who died in California.

Hinman Leads Paper Firms In Unusual Bond Drive

J. H. Hinman, president of International Paper Co., served as chairman of the paper industry division which made a remarkable record in New York City's Seventh War Loan drive.

Almost every paper firm in Manhattan participated and latest reports were that the paper division in that city had exceeded by virtually 2½ times its $10,000,000 quota.

Mr. Hinman's assistant chairman for the drive was F. A. Auffermann, Jr., assistant secretary of International Paper Co.

Rayonier Sulphite Mill Will Reopen With New Ammonia Base Cooking System

THE Shelton, Wash., division of Rayonier Incorporated has received War Production Board approval for a new sulphite mill disposal system and is proceeding with its installation.

Ammonia, instead of lime, will be a base for the pulp cooking process and the waste liquor will be evaporated and burned.

There had been previous pilot plant operations of the ammonia-base cooking system in eastern and Canadian mills but this will be the first commercial application of the process on the continent. It is a process which has been the subject of research here and abroad for years.

Construction calls for a 375-foot reinforced concrete stack, evaporators and furnaces.

This new disposal plant is being built on a hillside adjacent to the pulp mill with the big stack on the top of the hill.

The stack, rising 540 feet above the headwaters of Puget Sound at the mill site, is near completion. It will be lighted and painted according to regulations of the Civil Aeronautics Authority.

The Shelton mill has been closed since August, 1943, because of the log shortage, and its reopening was made possible by purchase of Clallam County timber holdings of Bloedel, Donovan Mills.

The government has been extremely anxious to reopen the mill because of critical military demand for its rayon-grade sulphite pulp.

Edward Bartsch, president of the company, announced that 450 men and women, mostly former employes, would be given jobs when the mill resumes operation some time this fall. A crew of 102 are overhauling and repairing the plant.

George Cropper is resident manager at Shelton and Edward J. McGill was recently transferred from the Fernandina, Fla., division to be superintendent at Shelton.

W. E. Breitenbach, vice president in charge of production, and the engineering staff of the company have been engaged for months in preparation and designing of the new equipment as well as planning for the reopening.

Eck Returns to Shelton

Gerard Eck, chemical engineer with the Central Technical Dept., Crown Zellerbach Corp., Camas, Wash., since the Shelton mill of Rayonier Incorporated closed down, is returning to his former position with Rayonier. Termination date for his Camas duties was June 30.

SIDNEY W. GRIMES, who resigned as Personnel Manager, Port Angeles (Wash.) Division, Rayonier Incorporated, to become, on Aug. 1, Employe Relations Director of the Pacific Coast Assn. of Pulp and Paper Manufacturers, with headquarters in Portland, Ore.

Vaughn Ide Promoted

Vaughn A. Ide, former engineer with Rayonier Incorporated at Port Angeles, Wash., has been promoted to first lieutenant in the Army Air Corps at Victorville, Calif. His wife resides at 222 E. 4th St., San Bernardino, Calif.

Hugh Lewis in East

Hugh Lewis, vice president and manager, Sorg Pulp Co., visited head office of Sorg Paper Co. at Middletown, O., and eastern Canadian pulp centers in June.

M. C. McDonald President of Chesapeake Corp. of Virginia

Elis Olsson, president and general manager of The Chesapeake Corp. of Virginia, West Point, Va., for the past 16 years, was elected chairman on July 3.

He is succeeded as president by M. C. McDonald, who joins the Virginia organization after serving 13 years as vice president and general manager of Brown Paper Mill Co., Inc., Monroe, La. Mr. McDonald spent 22 years in all at Monroe, starting as resident engineer on construction of the Brown mill. He previously had been engineer in the George F. Hardy firm for four years.

Mr. Olsson will continue to actively guide affairs of the West Point kraft plant.

Other officers, remaining unchanged, are W. C. Gouldman, vice president-secretary; J. O. Ekberg, vice president; O. D. Dennis, treasurer, and E. S. Gray, assistant secretary.

Sherman Personnel Manager At Port Angeles Mill

H. Edward Sherman has been appointed to the position of personnel manager of the Port Angeles, Wash., division of Rayonier Incorporated, as of August 1, it is announced by W. E. Breitenbach, vice president of the company and resident manager at the Port Angeles mill.

Last month it was announced that Sidney W. Grimes, personnel manager since 1937, had been selected as employe relations director for the Pacific Coast Association of Pulp & Paper Manufacturers, and will have offices in Portland, Ore.

Mr. Grimes joined Rayonier during 1926 at Shelton and after two years there, moved to Grays Harbor during construction of that division. He was millwright and machinist of the Crown Zellerbach mill in Port Angeles from 1929-1937.

Mr. Sherman joined Rayonier at Port Angeles as an accountant in 1936 and was assistant personnel manager there until his transfer to the Shelton division as personnel manager in April, 1945.

Pulpwood Inventories Decline in Northwest

George Stevenson, industrial specialist in the log and lumber administrator's office, War Production Board, Portland, Ore., supplies the following figures as to Northwest pulpwood inventories and usage during May:

PUGET SOUND MILLS

	Thousand Feet
Inventory (April 30)	81,491
Total Receipts	70,405
Use	67,045
Transfers	6,570
Inventory (May 31)	78,281

COLUMBIA-WILLAMETTE MILLS

	Thousand Feet
Inventory (April 30)	82,675
Receipts	67,379
Use	59,665
Transfers	10,714
Inventory (May 31)	79,675

Rayonier Man Models Human Arm for Medics' Use

Tech. Sgt. P. E. Sullivan, on leave from Rayonier Incorporated, Shelton, Wash., and formerly with Crown Zellerbach Corp., Port Townsend, Wash., has modeled an ingenious plaster of Paris replica of the human arm for instruction in army first aid work at Camp Pinedale, Calif.

Sgt. Sullivan, an instructor at the camp, devised the model for training in administering blood plasma. Students inject needles through a "skin" of lastex and the colored fluid they use, if administered correctly, circulates in rubber tubing "veins."

I. P. Expands in Veneer

International Paper Co. is building at Gatineau one of Canada's largest hardwood veneer plants.

The upper left illustration is that of a thrifty second growth forest in the Brooks-Scanlon holdings in Florida, while the one at the right is a view of a tract that has never been logged. At lower left is one of the company's fire fighting units, equipped with water tanks, pumps, hose and tools. The illustration at lower right shows man using portable radio. Throughout its woodlands the company has constructed 6,000 miles of fire lanes, and several thousand miles of good roads, which also serve as fire breaks, with telephone lines along all the roads that have drop wires for use of fire patrolmen with their portable telephones.

A Perpetual Forest In Florida

On a privately owned forest empire of 420,000 acres, the Brooks-Scanlon Corp., at Foley, Florida, had undertaken the continuous production of timber crops for the purpose of maintaining indefinite operation of its lumber manufacturing plant, and also as a source of pulpwood supply.

This company is — like all Southern forest operations — interested in the pulp manufacturing possibilities.

At present, the company markets its pulpwood but it is not unreasonable to expect it may eventually integrate and diversify its operations, as have other Southern operators.

The company is placing major emphasis in its forestry program at this time, upon adequate fire protection for its timberlands, and this company is conceded to have one of the most comprehensive and efficient fire protection systems in the South.

The Brooks-Scanlon Corp. is one of the largest lumber manufacturing concerns in the United States, with large mills in the West and in Florida. The company began lumber operations in Florida on outskirts of Jacksonville, in 1918.

Founders of the Florida company were the late M. J. Scanlon, Dr. D. F. Brooks and Anson Brooks. Mr. Scanlon was the first president. When the company started making lumber at Eastport, the late J. S. Foley was vice president and general manager. He became president in 1930 and served in that position until his death in 1941. Present officers are his son, M. J. Foley, president (and brother of Harold Foley, president of Powell River Co.); Edward Brooks, vice president; John M. Hollern, secretary, and Paul Keenan, treasurer.

Lester Foley, another Foley brother (see picture on next page), is interested in distribution of the Florida organization.

LOUISIANA AND TEXAS MILLS
Help to Create Permanent East Texas Forests

FAR-SEEING management in the pulp and paper industries dependent upon the East Texas area as a source of raw material is giving close study to problems created by annual burning and war-time over-cutting of non-industry owned lands, and this is expected to result in the bulwarking of positions against possible shortages of pulpwood.

Developments now in progress as a result of such studies will bring, in all probability, the effectuation of the policy laid down in Public Act 273 of the 78th Congress pertaining to pledging of national forest timber, and in absorption into definitely planned utilization of available private controllable land holdings.

In short, those industries having a management vision that lifts beyond the immediate future and are so planning that if the day should come when forest enterprises are divided between the "haves" and "have-nots" their plants will be counted in the first named group.

There is an accentuating trend toward division of the forest product industries into one group having a permanence based on fire-protected selectively logged holdings and another that depends upon open market purchasing of wood.

Supplies Louisiana Mills

The growing importance of this factor is manifested by the attitude of industry leaders interviewed by PULP & PAPER INDUSTRY. While speaking of the resources of the area as extensive, they make a point to mention that East Texas forests are also drawn on by pulp mills and other industries in Louisiana.

An old established naval stores operation at DeQuincy, La., draws on East Texas, and the naval stores plant to be erected in DeRidder, La., by the Crosby Lumber & Manufacturing Co. will extract from stumps from the Kirby Lumber Corp., also in East Texas.

Pulpwood is bought in East Texas by the pulp and paper mills at Elizabeth, Hodge, Springhill and Bastrop, Louisiana. Some of this material comes from within 40 miles of Houston, Texas.

The East Texas forest area is considered one of the most prolific in the South and has supported forest product industries over a very long period of years. There are at present within the area, pulp and paper operations that expect to continue indefinitely because of smart long-term forestry management. However, a great portion of the section is subjected to the ills of non-industry, absentee ownership. It is the irony of fate that the larger lumber operators—branded in the past as exploiters—are the leaders in forest perpetuation on their own lands and Mr. John Q. Public has the role of the landowner who thinks anything wrung from trees is a bonanza, and not a periodic reward of good management.

Industry Owns 25%

One authoritative source says that 25% of East Texas forest land, or approximately 3,000,000 acres is held by industry. Farm woodlands, defined as acreage of which some part is tilled, amounts to 2,664,000 acres, or 21%; and non-land occupying owners hold 5,965,000 acres, or 49% of the total 12,259,000 acres of forest land and about 652,000 acres, or 5%, is held by the government in National Forest.

This acreage held in actual National Forest has proven of intense interest to the forest product industries. When authorization of acquisition was first extended, many within the industries thought the U. S. Forest Service would take over the extensive denuded longleaf pine areas and reforest them. The substantially bare areas were created because their virgin stand was even aged and mature. Logging was by railroad, which meant a heavy expense apportioned on the per M feet on a one-cut basis. The present block-cutting introduced in the Pacific Northwest comes too late for southern virgin longleaf pine stands.

Instead of acquiring old longleaf lands, the U. S. Forest Service stepped into the more diverse and better soils of short leaf areas which produce a much more rapid growth. In East Texas acquisitions were from non-operating lumber companies, that is corporations that had cut-over the lands and closed down their corresponding mills.

These acquisitions included 94,000 acres from the Houston Lumber Co., 62,000 acres from Trinity County Lumber Co., 83,000 from Delta Land & Lumber Co., 90,000 from Pickering Lumber Co., 13,000 from Gilmer Lumber Co., and 74,000 from the Long-Bell Lumber Co. Other acquisitions included 30,000 acres from non-mill operators, and 184,000 from four lumber manufacturing concerns still active.

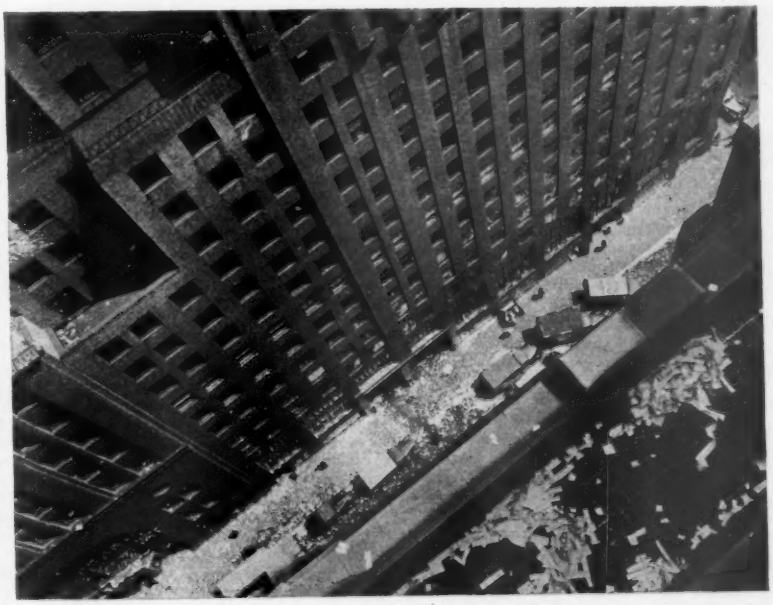
The average price paid for the 653,872 acres was $4.62 per acre. These lands now comprise the four national forests in East Texas, namely, Angelina, Davy Crockett, Sabine and Sam Houston.

Lands acquired for National Forest that had to be artificially reforested were situated in the lower end of the East Texas area. The cost of such work ranges from $7 to $12 per acre, including replanting, and it is estimated that at 16 years pulpwood stand amounts to 10 cords per acre. In the balance of the areas it was only necessary to protect the young growth from fire.

One of the factors in East Texas logging operations is that of rainfall. It is said that surfacing of roads is necessary if operations are to continue regardless of the weather inasmuch as when the roads are wet they will "bog a snipe."

May Be Self-Sustaining

The purpose of National Forest areas in the South, it is stated, has been to demonstrate that at the rate of growth of timber, forests under management can pay their way. During the fiscal year of 1944 the gross income from the Davy Crockett National Forest was $1.11 per acre; Angelina National Forest, 6c per acre; Sabine, 29c per acre; and Sam Houston, 56c per acre. The average was 52c per acre and the total expense averages about 25c per acre. The demon-



LOOKING DOWN on 41st Street, New York, from the eastern headquarters of PULP & PAPER INDUSTRY magazine on the 13th floor (we're not superstitious) of the 370 Lexington Ave. building—and you know when.

Yep—'twas VE Day. Entrance across the street is to Chanin Building, where American Paper & Pulp Assn., U. S. Pulp Producers Assn., TAPPI and other associations and paper companies have their headquarters.

But the paper men plead innocent to this waste of paper.

stration proved that forest lands could be so operated and pay taxes.

Because of the trend in forestry toward complete stabilization of industry it is said that East Texas, at some not too distant date, may have approximately 3,600,000 acres of forest land under sustained yield management. This opinion is based upon anticipated successful conclusions of negotiations now being carried on between forest product industries and the U. S. Forest Service for the effectuation of Public Act 273 of the 78th Congress. It is understood that six pulp and paper and other forest product industries are interested in bulwarking their holdings through recourse to National Forests.

The objectives of Act 273 are set forth in part as "to promote the stability of forest industries, of employment, and of taxable forest wealth, through continuous supplies of timber." Under its terms the secretary of agriculture (and interior) may set up cooperative sustained yield units composed in part by national forest land. The cooperating forest product industry must enter into an agreement as to timber cutting practices on his own land, but in return is assured that cuttings on national forest land within the "unit" will come to his plant.

This assurance rises from a privilege of purchasing national forest timber and other products without competitive bidding, stumpage values to be adjusted periodically.

The experience of industry in East Texas has been that sales of timber by private owners have followed closely the prices yielded in public sales of National Forest stands. This being the case, forest product industries have no adverse margin in a contract under Act 273 to pay "market" prices for timber held exclusively for their use.

The objectives of the Forest Service are in no wise different from the policy followed on their own land holdings. It is universally said in East Texas that industry is "doing a swell job" on selective cutting on their own lands.

The U. S. Forest Service cuts a minimum of three cords per acre where there are no saw logs. Where the stand is such that cutting is mostly a sawlog job, the pulpwood cutting is mostly for thinning.

Praise for Champion

The forest product industries in Texas accord credit to the Champion Paper & Fibre Co., Pasadena, Texas Division, for performing a real forestry job in utilizing tree tops in a contract with Kirby Lumber Corp. as long as the operations involved made this possible. The Champion mill uses only pulpwood contractors. W. R. Crute is manager of Pasadena operations of that company.

Cutting in East Texas for Calcasieu Paper Co. at Elizabeth, Southern Advance Paper and Bag Co. at Hodge, and the International Paper Co. mills at Springhill and Bastrop, La., has been through contractors and lump sum buying of stands. The cutting of such pulpwood on small stands has been to a large extent on the basis of "take all," a situation forced by landowners.

Pulpwood cut for the Southland Paper Mills at Lufkin, Texas, is in 4-foot lengths, but other cuttings are in 5-foot lengths.

Those who have the best interests of the East Texas forest land belt at heart agree that the industry owned land now presents no problems from the standpoint of management; that the man who lives on the land can be reached under the Norris-Doxey law activity; but that the large bulk of owners not so informed present real problem.

Forest lands embraced in National Forest also have some acreage in which grazing permits are granted at 10c per head per month. These lands so affected are in plantations and are fenced. About 35,000 acres of these lands are under hog-proof fence.

Management of lands by the U. S. Forest Service includes controlled burning in which small areas are crossed with fire-breaks and the excessive dead grass reduced by burning against the wind.

Most of the artificial reforestation was effected in the Angelina and southern end of the Sabine National Forests. Planting was effected between 1936 and 1940, with pulpwood yield expected for 1950.

Local tax authorities receive 25% of the National Forest receipts in lieu of taxes.

For the first three quarters of the fiscal year of 1944-1945, the Texas National Forests sold 76,881 MBF valued at $305,458 and cut 74,854 MBF. It is aiming for a year's cut and sale of 100,000 MBF each.

Recent visitors to Powell River Co., Powell River, B. C., were LESTER W. FOLEY, of Foley, Fla., brother of HAROLD S. FOLEY, President of Powell River Co., and E. MORRISON, representing the Brooks-Scanlon interests of Philadelphia. Here (left to right) are: GEORGE O'BRIEN, Vice President, Powell River Co.; LESTER FOLEY, MR. MORRISON, and (right) RUSSELL M. COOPER, General Superintendent, Powell River Co.

Official Discusses Psychology of Forestry

Most Southern pulp mill and timber operators rate protection as the No. 1 factor in a timber growing program. But H. D. Story, assistant director of the Georgia Department of Forestry, believes that planting is even more important than protection.

"This may sound strange," Mr. Story said to PULP & PAPER INDUSTRY in a recent interview, "but what I mean is this. We all know that timber lands should be protected and are being protected from fire, but when a man plants some trees and has a timber crop growing you do not have to talk protection to him. He is bound to protect that investment. So the more people, the more farmers we can get to plant timber the less we will have to sell protection. Protection will become automatic and take care of itself."

J. M. Tiker is director of Georgia Department of Forestry. He was not on hand when a representative of this magazine visited the department's offices in the State Capitol at Atlanta. Mr. Story pointed out that Georgia has two nurseries, one at Flowery Branch, established in 1938, and one at Albany, established in 1938. For the four years prior to 1943 these nurseries produced and disposed of 23,000,000 one-year-old seedlings annually. The trees are sold at cost and Mr. Story says that about 85 per cent are sold to farmers. So it is apparent that the planting idea is taking hold in Georgia.

Mr. Story stated that most of the planting is with slash pine although the other species are also planted and some hardwoods.

Mr. Story stated that one-third of Georgia is under intensive protection.

He also said that in Georgia there is plenty of room for both pulp mills and sawmills and that enough timber can be produced to enable both types of operations to operate perpetually. He does not think there is competition between the two branches of the industry because of the different type of raw material desired by each.

Louisiana Acts To Curb Forest Fires

Enactment by the Louisiana legislature in its 1944 session of a statute authorizing parish (county) authorities to levy or appropriate a tax of 2c per acre for forest fire protection has been followed by appropriate action placing 2,291,100 acres of forest and cut-over potential forest lands on the preferred list. Under the set-up, where each parish pays 2c into the state forestry fund, an amount equivalent to 6c per acre will be expended for fire and other protection.

Parishes that have ordered the levy, and the acreage in each as taken from the Louisiana Tax Commission records are:

Bienville, 343,280 acres; Bossier, 322,100 acres; Caldwell, 222,831 acres; Grant, 228,174 acres; LaSalle, 360,918 acres; Sabine, 496,208 acres, and St. Tammany, 317,589 acres. Less than 100,000 acres of this is assessed as hardwood and pine timber land.

In addition to those parishes already levying the 2c per acre tax, five other local units are expected to follow suit within a short time. These include: Allen, 344,545 acres; DeSoto, 343,132 acres; Livingston, 174,326 acres; Natchitoches, 458,631 acres, and Webster, 180,275 acres; total, 1,500,909 acres.

The Louisiana legislature also amended the state's criminal code to admit the crime of wilful burning of forest land. Also two parishes have posted rewards for arrest and conviction of forest land burners.

How Powell River Co. Handles Labor Problems

ABOVE IS MINIATURE MODEL of Powell River Co.'s new log pond and wood-handling equipment. An accompanying article on this page describes its operation and the objects shown in this model.

Here, also, is shown Powell River Co.'s Labor-Management Committee in session. Left to right: Thomas Waldron (partly out of picture) president Local 142; Robert McPherson, Frank Flett, Employment Superintendent; C. Murray Mowatt, President Local 76; Ed. Acquihin; E. H. Bertram; W. E. McGillivray, Groundwood Superintendent; Fred Riley, Newsprint Superintendent; Russell M. Cooper, General Superintendent; W. A. Alton, Secretary to the Committee, and D. A. Evans, Resident Manager.

Powell River Co. operates on the theory that labor shares with management the responsibility of performing a good job. The result has been the development of a thoroughly democratic organization in which everyone has a voice in the administration of such activities as health maintenance, job training, rehabilitation of veterans, labor agreements and other matters relating to personnel.

Years ago the company put in force a policy of cooperation between executives and workers, and as long ago as 1937 employees had their opportunity to say whether or not they wanted union representation, with the result that the International Brotherhood of of Pulp, Sulphite and Paper Mill Workers and the International Brotherhood of Papermakers were enabled to proceed with organization. Relations between the company and labor have been harmonious largely because of the fixed policy of frequent consultation between management and men and a determination to give everyone a chance for the expression of opinions.

When matters outside union agreements but affecting the general personnel arise, they are usually referred to the advisory union-management committee comprising five permanent members —resident manager, general superintendent, employment superintendent, and two union presidents. Others are called in temporarily when specific subjects for discussion concern them directly. Although formed primarily to deal with wartime problems, the committee has had such consistent success that it will probably be a fixture at Powell River, B. C.

The committee believes in dealing with questions as they arise rather than in waiting until friction develops through delay and misunderstanding.

Frank Flett, employment superintendent, who is the man that new employees see first, knows how to talk to the men in their own language and he knows all phases of the mill operations through personal experience. Flett is a slasher of red tape and his only theories are based on common sense and practical ideas.

The management is always looking for suggestions from the staff, and the steady stream of ideas—the company pays generously for those that are workable and worthwhile—flows into the hopper. More than 300 suggestions were turned in last year, and 83 were accepted.

Readers of PULP & PAPER INDUSTRY are already familiar with the job-training program instituted some time ago by the company. It has already achieved its object of encouraging men to get ahead by knowing their job and specializing in the fields to which they are best adapted.

How Powell River Planned Improved Log Pond

Re-designing of the log pond at Powell River, B. C., is now under way so as to facilitate the Powell River Co.'s program of diversification and maximum utilization. Under the new setup it will be possible to segregate logs according to size, species and grade.

Sorting pockets will be installed to effect segregation, and artificially created currents will float the logs to the sawmill log haul. A miniature log pond (shown in picture) was built to enable the technical staff to make a hydrographic study, the depth being exaggerated to reproduce correct currents.

Because half the pond was dry at low tide, dredging was necessary both to deepen the pond areas and provide space for sorting pockets. A sheet pile wall also had to be installed to divert from the log pond the tail races from the four big penstocks carrying the flow of the Powell River dam.

The pond area is being dredged to provide five feet of water at dead low tide. H. Moorhead, resident engineer in charge, was faced with several complex problems in this connection, and the building of the miniature log pond assisted. This was built in the form of a wooden tank 12″ x 8″. On the horizontal plane, one inch equals 30″, but vertically half an inch represents one foot. Salt water was used in the tests in the same concentration as the sea and fresh water, representing the tail races.

Powell River Pension

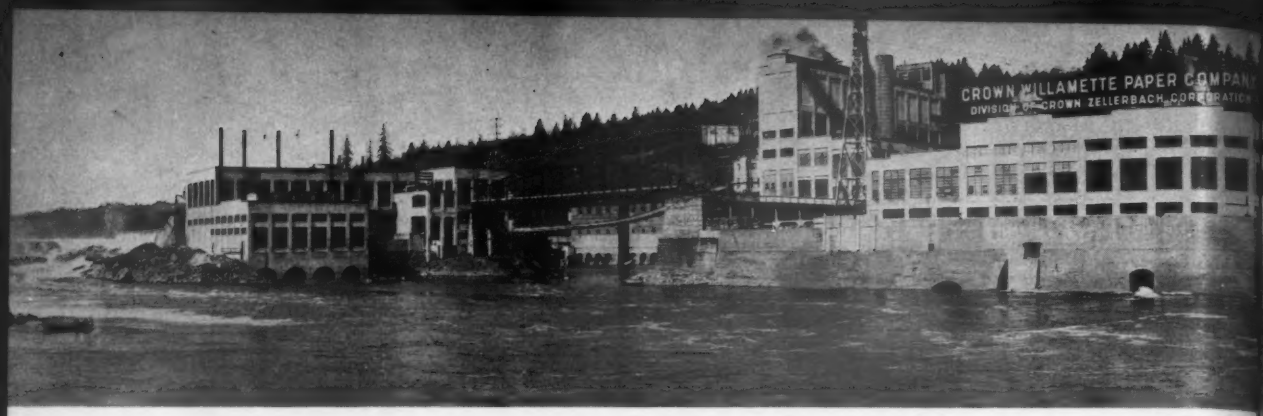
Powell River Co. has adopted a contributary pension plan for its 1600 employees. Under this program a retirement income at the age of 65 for males and 60 for females is provided.

Eligible for participation are employees who have completed three years of service with the company and who are over 24 years of age but not over 64. Annuities arranged under the plan are being provided by the Canadian government under a master group contract issued by the department of labor. Maximum annuity is $100 monthly.

Fair Vice President

A. E. H. Fair has been appointed vice president of Alliance Paper Mills at Merriton, Ont., and Georgtown, and also vice president of Don Valley Paper Co., Toronto. Announcement was made by Harold Crabtree, president of Howard Smith Paper Mills.

Mr. Fair has been with the company since it acquired Lincoln Pulp & Paper Mills, with which he was associated, in 1929.



West Linn, Ore., mill—to make first on-machine coated paper in Far West.

CROWN ZELLERBACH ANNOUNCES $1

Coated Papers for West Linn

A $15,000,000 program for expansion and improvement of its pulp and paper plants is announced this month by Crown Zellerbach Corp.

Probably the most significant fact about this announcement is that it is a dramatic demonstration of how the really active program of the pulp and paper industry for renewal and perpetuation of its forest resources pays off. It pays off in making possible the growth of the industry on a scale that would have been utterly impossible otherwise.

It is the pulp and paper industry which has been a prime mover in developing techniques, not only for conservation, but for an increased timber supply throughout North America.

The announcement of the Crown Zellerbach Corp. might be viewed as virtually marking a turning point in the outlook for the industry in the West.

The Crown Zellerbach Corp. has up to this date been rounding out its forest holdings, establishing a balanced wood supply, with new annual growth approximately equal to the annual needs of the company's five Washington and Oregon mills. New acquisitions to Northwest timberlands (see p. 28, April, 1945, PULP & PAPER INDUSTRY), have brought total ownership under scientific management to about 400,000 acres.

Expansion Program

Here is the program made possible by forest policies of the company and which, in some cases, supplement those policies by making possible further wood conservation in manufacturing processes (this program is to be carried out in the next several years, as wartime restrictions are lifted and materials become available):

West Linn, Ore., Division

Two machines for coated paper; one entirely new, the other rebuilt.

Soda pulp mill (abandonment of sulphite process).

A 75-ton bleach plant (to be enlarged later).

Six large motors to furnish power in low water period for groundwood mill.

Three-story finishing building with three supercalender stacks.

Three-story building for storing and mixing coating clays.

Locker and dressing rooms for 750 employes.

Camas, Wash., Division

Two-system kraft mill of double present capacity.

Seven-stage kraft bleach plant.

Two new machines—one for facial tissue, the other for high grade specialties.

Kraft screening building.

New boiler plant.

New finishing room.

One or more hydraulic log barkers and new chippers.

Port Angeles, Wash., Division

Hydraulic log barker.

Resumption of newsprint machine (one of three has been shut down).

Port Townsend, Wash., Division

New kraft chemical recovery unit.

Drum barker for farm wood, in addition to hydraulic log barker installed last year.

New Coating Process

Long-term contracts have been signed with Time Incorporated and another large eastern publishing firm for from 45,000 to 60,000 tons of coated paper annually. This requires important changes in the paper mill at West Linn, where No. 5 and No. 6 machines will be withdrawn from newsprint production.

No. 5 is being completely rebuilt by Beloit Iron Works into a modern, high speed paper machine to

Making History At West Linn . . .

The sulphite mill at West Linn, Ore., which is to be replaced by a soda pulp mill, is 55 years old.

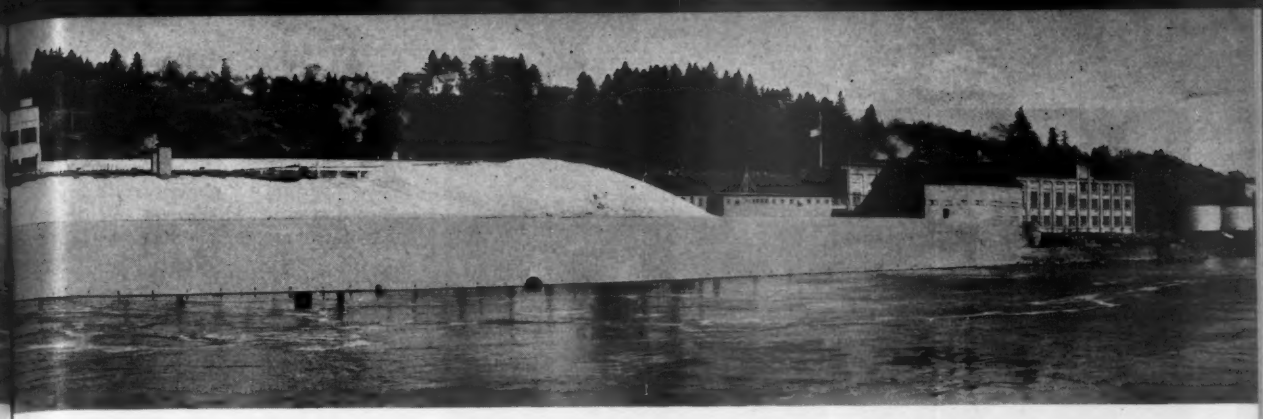
This pioneer Oregon plant began making newsprint for San Francisco newspapers from cottonwood in Oct. 1889, using four tower grinders and two 72-inch wet machines.

In July, 1890, a nine-ton-a-day sulphite mill was completed and commenced operations. Also, four more grinders and two wet machines were added. About 30 cords of cottonwood were consumed daily.

The management — Willamette Pulp & Paper Co., organized in San Francisco with capital stock of $600,000—announced it would add more machines and make finer quality papers as rapidly as the demand justifies.

About 125 were employed in the mill with more in logging camps. Payroll totalled $10,000 monthly. After the first year, the output per day was 20 tons of groundwood pulp, 10 tons of sulphite pulp and 10 tons of newsprint.

Today its 24-hour capacity is 125 tons of sulphite pulp, 435 tons of groundwood (plus 60 tons more in the Oregon City division of Crown Zellerbach Corp. across the river), and 375 tons of news, wrapping, poster and sulphite specialties. It has also utilized hemlock, spruce and white fir since the dim distant days when it started with cottonwood.



View extends from Willamette River falls to the historic inn (extreme right).

$15,000,000 EXPANSION PROGRAM

Camas to Double Sulphate Capacity

produce coated papers on reels 140 inches wide.

No. 6 machine will be replaced by an entirely new high speed Beloit machine for production of coated papers in reels 155 inches wide.

Cameron Machine Co. rewinders will follow both machines.

The coating process is being introduced at West Linn on an exclusive license to make coated book paper in rolls on the Pacific Coast by the process of the Consolidated Water Power & Paper Co., Wisconsin Rapids, Wis.

This will be the first time that on-the-machine coating of paper will ever be done in any mill in North America west of the state of Wisconsin. It is to be distinguished from the brush-coating processes in that it is a high speed mass production process meeting the requirements of the rapidly expanding mass circulation slick paper magazines.

Because of transportation problems coupled with the increasing circulation in the West, Time magazine pioneered in the production of that part of its circulation in California during the present war, making up the magazine in the east and flying the made-up pages to the coast for publication. It has proved such a successful experiment, that the Time-Life group has joined with western printers in purchase of a 15-acre site in Vernon, Los Angefrom the Consolidated Water Power & Paper Co., Wisconsin Rapids, Wis.

About ten years ago the on-the-machine coating process was developed at the Consolidated mill in Wisconsin Rapids. With the advice and assistance of President George Wilson Mead of that company, Peter J. Massey carried through the development work at that mill. Mr. Mead convinced his board of directors of the feasibility of the process and carried the development work thru to successful commercial application.

It was a timely development, for

Air view of Camas, Wash., mill, where sulphate mill capacity will be doubled. Here, on Columbia River, the first paper mill in Washington territory began making newsprint for Portland, Ore., papers in 1883. Residents of Lacamas—as it was then known—were paid 69 cents per ten-hour day to clear a windfelled forest for the site. Today, more than 2,100 employes are among many more in the west paid highest wage scale in world for this industry.

CLARENCE E. BRUNER (left) and JACK E. HANNY (right) veteran Resident Managers of the two big Crown Zellerbach mills whose operations are to be expanded. PETER T. SINCLAIR (center) was appointed Assistant Resident Manager at West Linn last year to be in charge of the coating process installations. Former Carthage, N. Y., mill manager he has spent many months at the Consolidated mill at Wisconsin Rapids, Wis., studying the process now to be introduced on the Pacific Coast.
Both Mr. Bruner and Mr. Hanny were at West Linn when the machines now being changed to coating paper were first installed. Mr. Hanny has been Manager at Camas for 15 years and Mr. Bruner has been Manager at West Linn for a like period, succeeding Mr. Hanny in that position.

Life magazine made its appearance in 1936 and the rotary, heat-set presses for printing were being developed. Up to then, it had not been possible to dry ink rapidly on coated papers. Now the paper industry was challenged, and speed and high production in making coated paper became necessary with the speed-up of printing on that kind of paper.

The Consolidated Water Power and Paper Co. has recently been supplying about half the coated paper requirements for Time and Life. Today there are a few other important patented on-the-machine coating processes but licensing of these processes has been a development of recent years, temporarily stymied by the war. Crown Zellerbach Corp. has exclusive right to the Consolidated process in Washington, Oregon and California for manufacture of coated book paper in rolls for rotary printing. Certain mills have similar privileges in a few European countries but war interrupted most of this expansion. It may be expected to resume as the war ends.

For more than a year, Crown Zellerbach officials have made visits in Wisconsin Rapids and closely studied the entire operation there through all steps of manufacturing and also marketing.

Peter T. Sinclair, formerly of the Port Townsend division and in recent years manager of the National Paper Products tissue mill at Carthage, N. Y., was relieved of these latter duties and assigned to full time on the study and development of the coated paper process for West Linn.

Acquires Paper Mill

The Wisconsin River Paper and Pulp Co. mill near Stevens Point, Wis., has been sold to the Consolidated Water Power and Paper Co., Wisconsin Rapids, and will be converted to the manufacture of coated book paper.

Consolidated has agreed to fill current contracts for newsprint for 14 Wisconsin daily newspapers until they can arrange a new source of supply. The Wisconsin River mill, last of the newsprint mills in the state, has a production capacity of 90 tons per day.

He was given every assistance by Mr. Mead, his sons, Stanton, vice president in charge of production, and Walter, vice president in charge of sales, and other officers of that company.

Mr. Sinclair was made an assistant resident manager at West Linn. On his last trip to Wisconsin Rapids he was accompanied by Jesse Harris, West Linn paper mill superintendent. Mr. Sinclair returned to West Linn to stay on April 21.

The process which is being installed at West Linn is described in these terms by Mr. Massey, its originator (see p. 10, Nov., 1944, Pacific PULP & PAPER INDUSTRY article entitled "A New Era in Machine Coating" for complete discussion of process by Mr. Massey):

"This equipment is based upon the premise of preparing a preworked film and applying said film to the continuous web of paper in its course of travel on the paper machine.

"The basic patents involving this principle cover a multiple number of rolls."

The coating equipment rolls are in position between the wet and dry ends of the paper machine.

Soda Pulp Mill

Outstanding postwar plan for West Linn is the abandonment of the sulphite pulp mill and the building of a new pulp mill to use the soda pulping process. However, the rebuilding by the U. S. government of the locks at West Linn which run the entire length of the mill properties on the west side of the Willamette River, necessitates the deferring of the soda mill until completion of the government project.

It is expected the new locks will be built just as quickly as the war is over. It would be too difficult getting chemicals and other materials delivered while this construction is carried on, as these would be more economically transported by water to the mill.

Also awaiting the government project's completion will be an additional water filtration plant of Northwest Filter Co. design and equipment, and an additional boiler installation.

Other West Linn Equipment

In order to serve the two coated book paper machines, a bleaching plant is to be built. At first, however, only a 75-ton per day sulphite pulp bleaching plant will be built and this will be installed in a new concrete building. Later this will become a part of a larger 250-ton soda pulp bleaching plant.

Installation of six large electric motors of 2500 horsepower each will furnish power during the low water periods, which have historically curtailed the groundwood operations at West Linn. This part of the mill in the past 57 years has operated during seasonal high water periods only. There is a fairly large force in the wood mill and groundwood mill for six or seven months a year and this force will have steady year-around employment when the new motors are acquired.

There will be separate stock systems in the groundwood mill—one for coated book paper and the other for newsprint. Stock for the coated paper must be ground more slowly and be prepared more carefully.

A modern three-story building for finishing equipment will replace the present wooden structure. Installations here will include a battery of three Beloit Iron Works 14-roll super-calender stacks, 155 inches wide, in addition to newsprint

finishing equipment for No. 9 machine. Coated paper reels will be brought in this building and run through the super-calenders in order to get the required finish and gloss for re-producing good photography and top quality printing, so important in modern magazines.

Camachine rewinders will follow the super-calenders.

As great quantities of clay coating are to be used, the clay storage and mixing equipment also will require a large, three-story modern concrete building. Clay and other chemicals will be mixed here to a semi-fluid consistency and pumped from the clay mixing room to the coating section of the two paper machines.

The principal source of coating clays are deposits in the state of Georgia and in England.

Use of coating on both sides of the printing paper not only produces a superior paper, but this new process at West Linn is calculated to save many tons of wood. The coating use means less wood pulp is required for a given quantity of the product and this conservation will be reflected clear back into the logging operations of the company.

A central locker room and dressing room will be built and equipped with modern showers and washroom facilities as well as individual lockers for 750 employes.

Camas Kraft Mill

A complete new kraft mill unit at Camas will increase the total sulphate pulp capacity of that mill to about 350 tons per day—bleached and unbleached—from the present capacity of 180 tons unbleached. A two-system kraft mill, operating as two distinct mills, will be equipped to manufacture two or more kinds of pulp from different wood species. Installations here will include five new rotating digesters, a new pulp washing room, a new lime kiln, high density stock storage chests and a complete new 200-ton B & W Tomlinson furnace and recovery system with Cottrell Precipitator.

Added to the present sulphite bleach plant building, a new concrete addition will be built to accommodate a kraft centrifugal screening operation, necessary for the expanded production. There will be no screening after bleaching.

This bleach plant equipment will be the first for sulphate pulp installed in any of the Crown Zellerbach mills. It will be seven-stage system designed and equipped by Improved Paper Machinery Corp., Nashua, N. H., and engineers of Crown Zellerbach Corp. believe it will go as far in the refinement of pulp as any system now in existence.

GEORGE WILSON MEAD, President of the Consolidated Water Power & Paper Co., a pioneer in a number of paper mill practices, who visioned the great future for on-the-machine coating and backed the first experiments in his mill. The process is now going to be introduced in the Far West.

PETER J. MASSEY, now Acting President and General Manager, H. P. Smith Paper Co., 5001 W. 66th St., Chicago 38, who developed the on-the-machine high-speed paper coating process which is being introduced for the first time on the Pacific Coast at the West Linn, Ore., mill. His pioneering work was done in Wisconsin Rapids, Wis., a decade ago.

This bleached pulp will be used to improve quality of papers for a new paper machine and permit production of some additional grades of top quality specialty papers. This is in line with the postwar program enunciated on several occasions by President J. D. Zellerbach of devoting the company's operations to greater production of higher qualities of paper in less competitive fields.

Two New Machines

As Mr. Zellerbach announced last Nov. 8, at a pin dinner in Camas, one of the new machines at that mill will be a Beloit Iron Works machine to make high grade facial tissue and facial toilet type tissue. He stated this machine will have a 1500 feet-per-minute speed with a 10-pound sheet at the wet end.

In response to growing demand for this type of paper, the production will be the first of facial tissue on the West Coast.

Additional equipment will be installed to convert products from this new paper machine. The latter will be installed between the present No. 11 and No. 12 machines at Camas.

Another new Fourdrinier paper machine is planned to make high quality grades of specialty papers. This machine will become No. 15 for the Camas mill. A new concrete machine room and finishing room will be built for it. The specifications of this machine are not finally settled as yet but it embodies all latest features of improved equipment.

Other Camas Equipment

One of the largest projects in the Camas building program will be major changes and installations in the wood mill. One or more hydraulic log barking machines will be used, but the design is still undecided. New equipment will make possible the use of smaller wood, new species of wood, non-commercial sawlogs and second growth and cordwood from nearby farm woodlots.

A new chip storage will be built and new chippers, of size and design still to be decided, will be installed.

A new high-pressure, oil-fired boiler plant with a capacity of 135,000 pounds of steam per hour will be constructed at Camas. This will be the first of two such units ultimately to be installed there.

Wood Savings

Wood savings made possible by the hydraulic log barking equipment already installed or announced for Port Angeles, Port Townsend and Camas mills will have a substan-

tial effect on the status of the company's timber resources.

Installations of hydraulic log barkers already made in the Pacific Northwest are credited with saving up to 20% of wood supply. In other words, the elimination of saw kerf lost in reducing logs and the cleaner job of barking done by water have made it possible to produce a given amount of pulp from 20% less wood than previously.

There is no way of ascertaining now how great the savings can be in the Crown Zellerbach mills. But it is safe to estimate that they will be from 10 to 20%, depending on how antiquated is the process and equipment supplanted. Improvements in wood rooms, generally, have become out-moded as new developments for saving wood have rapidly advanced, but war restrictions have delayed installation of modern equipment.

To Use More Trucks

When manpower is available Crown Zellerbach Corp. plans to convert its old logging railroad grades into truck roads. These will provide access for tree plantings, transport of fire fighting equipment, systematic thinnings and a more complete recovery of what has been considered non-commercial timber of smaller sizes, formerly left in the woods.

Thus the whole program of improvement and expansion is tied up closely with the long range, long-planned progressive forest policy.

It will make possible, the company states, the hiring of many additional employes as well as absorbing of the regular employes now on leave in military service. Nearly 1,000 of these men on leave are from the mills mentioned in this article and that is only a portion of the total Crown Zellerbach list of employes serving in uniform.

Fourth New Pulp Mill Discussed For British Columbia

Potential source of power for pulp and paper developments on Vancouver Island is Elk Falls of Campbell River, which the British Columbia government has decided to harness.

Premier John Hart, in announcing the government's plans, stated that a large industrial organization has applied for a block of from 8000 to 10,000 horsepower to proceed with the establishment of a pulp mill, but the company was not identified. This would be the fourth new postwar mill for British Columbia, if it proves to be a serious project.

Meantime the Niagara Falls engineering firm of H. G. Acres & Co. has been engaged to make a survey of the hydro-electric potentialities of the river. It is expected that 50,000 horsepower will eventually be generated there.

Several years ago power rights at Campbell River were held by various groups, including International Harvester Co., which was said to have been ready to finance a pulp mill. Recently, the government alone has held the rights.

Aside from this reported Campbell River project, three other new British Columbia mills are planned or being built:

1. Bloedel, Stewart sulphate mill, now being built at Port Alberni, Vancouver Island.

2. W. B. Milner organization's sulphite mill, planned at Giscome, B. C.

3. Powell River Co.'s plans for sulphate mill addition at Powell River.

COL. H. WYATT JOHNSTON, who has been appointed Canadian representative of Sutherland Refiner Ltd., 319 Drummond Bldg., Montreal. He served in both World Wars, returning to civilian life last year after four years in helping raise the Forestry Corps and as Gen. Staff Officer in Montreal and at Camp Borden, Ont.

Formerly officer-in-charge of pulp and paper div., Forest Products Lab., Montreal, he recently was research associate of Pulp & Paper Research Institute of Canada. Is authority on wood cooking.

S. M. Bratton Resigns From Delaware Firm

Samuel M. Bratton has resigned as chief engineer of the paper machine division, Pusey and Jones Corp., Wilmington, Ded. He was first employed as a draftsman in 1917, becoming assistant chief engineer in 1930 and chief enigneer in 1934. He was previously employed by the Hilles and Jones Co., now affiliated with the Consolidated Machine To. Co. Mr. Bratton has not announced any plans for the future.

Progress On New Vancouver Island Mill

Dredges are already at work on the site of the projected kraft mill of Bloedel, Stewart & Welch, Ltd., at Port Alberni on the west coast of Vancouver Island. Foundation will probably be laid sometime during the coming fall.

Meantime Howard Simons, formerly of Seattle and Chicago, is busy at his new office in Vancouver, B. C., completing the plans for what will be British Columbia's newest pulp operation.

Present plans call for a production of about 160 tons of pulp daily. Some of the raw material for the mill will be in the form of slabs from the Bloedel sawmill at Port Alberni and other nearby lumber operations. The company holds extensive hemlock stands comparatively close to the mill site, however, and these will eventually be utilized.

Burt Williams, Consolidated Official, Died June 2

Burt Williams, promotional director of Consolidated Water Power & Paper Co., Wisconsin Rapids, Wis., since 1934, died June 2. He was 73.

Mr. Williams was father-in-law of Stanton W. Mead, vice president of the Wisconsin Rapids paper company. Besides his daughter, Mrs. Stanton Mead, he is survived by his son, Gilbert D. Williams, of Wisconsin Rapids.

Their father was former publisher and once was mayor of Ashland, Wis. He directed the George W. Mead Paper Institute in Madison, Wis., from 1930-1933.

War Contract Rules Should Be Used By Firms

● The U. S. Army Public Relations Bureau said in a letter to this magazine that the Joint Army-Navy Termination Regulation is the "bible" for war contractors to be used in the rapid settlement of war contracts, and that it is "imperative" that war contractors be placed on the mailing list for the Regulations and all subsequent changes. Contractors merely have to write the Joint Army-Navy Distribution Center, 90 Church St., New York, Attention: Lt. E. P. Lull, for copies.

Plans for Superintendents Association; Sam Salmonson Receives High Honor

THE only honorary life membership voted in the American Pulp & Paper Mill Superintendents Association for the year 1945 goes to Sam A. Salmonson, assistant general superintendent at the Soundview Pulp Co., Everett, Wash., and who, this past month, began his second one-year term as chairman of the Pacific Coast Division of the association.

The only superintendent on the continent to win this honor traveled the farthest of any of the small group who attended the APPMSA meeting of trustees in the Commodore hotel, New York, June 8-9.

Niles Anderson, vice president and manager of the new Marathon Corp. subsidiary pulp mill, which is being built at the new town of Marathon, Ontario, proposed this honor for Mr. Salmonson at the final session and it was unanimously approved.

Incidentally, Mr. Anderson resigned as the first vice president of the association because of pressure of work in Ontario, and thus removed himself from what would have been automatic succession to the presidency when Raymond L. Barton's extended war term ends.

Mr. Barton of Michigan Paper Co. of Plainwell will continue in the presidency until next year when it is hoped that a convention will be possible—probably in Chicago. The 1947 convention is likely to be on the Pacific Coast.

When the war interrupted the program, it was planned that by the time Mr. Anderson had moved up to the presidency, the Pacific Coast convention would be held. At the time this was planned, he was manager of a western mill — the St. Regis mill at Tacoma, Wash. Even though he has now given up the honor for which he had been in line for several years, as he worked up through various vice presidencies, the general sentiment of the association is for a San Francisco or other coast convention as soon as conditions return to normal.

Latimer Next President

Homer H. Latimer, mill manager, Champion Paper & Fibre Co., Hamilton, O., succeeds Mr. Anderson as first vice president and it will be Mr. Latimer who eventually succeeds Mr. Barton when the first convention is possible. If a meeting is possible in Chicago next year, then Mr. Latimer would preside over the Pacific Coast meeting the following year, presumably.

SAM A. SALMONSON, Asst. General Supt., Soundview Pulp Co., and a superintendent in the sulphite industry since 1907 in various Canadian and U. S. mills, was elected to a life membership in the APPSA in New York June 9.

Raymond F. Bennett, Ecusta Paper Corp., moved up to second vice president; Ollie W. Messner of Robertson Paper Box Co., to third v-p, Charles H. Reese, Nekoosa Edwards Paper Co., to fourth v-p and the newcomer elected to this dynasty is James Fish, of Paterson Parchment Paper Co., Bristol, Pa. He takes the title of fifth vice president.

Salmonson's Career

Mr. Salmonson is the second man in the Soundview Pulp Co. to hold a life membership, the same honor being voted last year to G. J. Armbruster, general superintendent of that mill.

On Mr. Salmonson's three week trip east, he and his wife visited relatives and old friends in Glen Falls and Palmer, N. Y., and in Temiskaming, Ont., places which were stepping stones in his career.

His brother, Victor Salmonson, is the present sulphite superintendent at Temiskaming, having succeeded Sam in that position when the mill changed from a Riordon operation to the International Paper Co. Victor, Sam and Sam's son, Walter, of Seattle, who travels for equipment companies, got together in that city on the Quebec-Ontario border last month.

Sam also visited Vance Edwardes, president of TAPPI, who is sulphite superintendent of the IP mill in Palmer, N. Y.

Mr. Salmonson's first job as superintendent was in 1907 at the Oxford mill in Rumford, Me. Then he was assistant superintendent at Powell River, B. C., during construction of that mill. From there he went to Mississippi when the Southern Kraft division of IP built the Moss Point mill, his job there being with the Joseph H. Wallace engineering firm.

Later he was field engineer for a Portland, Me., engineering firm, travelling all over the continent and in 1916 returned to mill operation as superintendent for Pejebscot Paper Co., Lisbon Falls, Maine. He joined the Riordon Pulp & Paper Co., as sulphite superintendent of its Merriton, Ont., mill and then went to Temiskaming as general superintendent, when Riordon built that mill. When it was sold to IP, he went west to Port Alice, B. C., and from 1923 to 1935 was with the former Crown Willamette organization, as sulphite superintendent at Camas, Wash., and from 1930-1935 as overseer of all its sulphite operations, with headquarters in Camas. He has been with Soundview for the past ten years.

Armbrusters Celebrate Two Wedding Anniversaries

Fred Armbruster, Seattle representative of Great Western Division, The Dow Chemical Co., and his father, G. J. Armbruster, general superintendent, Soundview Pulp Co., Everett, Wash., and their wives had a joint celebration of their wedding anniversaries on June 20 at the Senior Armbruster's Lake Stevens cottage.

It was No. 10 for Fred and No. 41 for G. J.

AFL Union Establishes Pacific Northwest Office

The International Brotherhood of Pulp, Sulphite and Paper Mill Workers, AFL, has established an office in 821-822 Puget Sound Bank Bldg., Tacoma, Wash., under direction of John Sherman, fifth vice president of the union.

Mr. Sherman said the office was established "to give better service to the union locals" and he hoped "it will strengthen our position as a union."

Bialkowsky Heads Coast TAPPI

An executive committee meeting of Pacific Coast TAPPI on June 12 at the Portland Hotel, Portland, Ore., produced announcement of election returns whereby Harold W. Bialkowsky, technical director, Everett, Wash., mill, Pulp Division, Weyrhaeuser Timber Co., assumed the chairmanship for the ensuing year.

G. H. Galloway, technical suupervisor, Camas, Wash., mill of Crown Zellerbach Corp., is the new vice chairman; with Robert M. True, Genera Dyestuff Corp., Portland, long-time secretary-treasurer, to continue in that capacity. Z. A. Wise, Griffith Rubber Mills, Portland, Ore., present member of the executive committee, was reelected to the committee, on which Erik Ekholm, general superintendent, Puget Sound Pulp and Timber Co., Bellingham, Wash., the retiring chairman, will also serve.

Results of the mail election were announced by Car E. Braun, vice president and mill manager of Hawley Pulp & Paper Co., Oregon City, Ore.

In a brief resume of the year's work under his chairmanship, Mr. Ekholm explained that the executive committee had concurred in cancelling of meetings and approved the plan to hold an election by mail.

After reading the treasurer's report by Robert M. True, and its acceptance, a discussion of plans for the coming year was requested by Chairman Ekholm. Suggestions were presented for a membership committee to canvas the possibilities of increased membership, both sectional and national; to hold more sectional meetings even though they be round-table discussions; to create a program committee to make sure individuals would be present and participate in topics. One paper presented for the Shibley Award will be held over for the 1946 competition under established rules of procedure.

Mr. Ekholm explained that W. R. Barber, technical director, Central Technical Dept. Crown Zellerbach Corp., Camas, Wash., had succeeded R. S. Wertheimer, vice president and resident manager of Longview Fibre Co., Longview, Wash., as national executive committeeman.

Mr. Bialkowsky, the new chairman, asked that members in Longview, Port Townsend, Port Angeles, Camas, Everett and Tacoma, canvas those towns for likely places for sectional TAPPI meetings and report results.

Besides those mentioned, others present were W. F. Holzer, Harry H. Richmond, Edge N. Wennberg, J. V. B. Cox, W. Norman Kelly and Svarre Hazelquist.

HAROLD W. BIALKOWSKY, elected by mail the new Chairman of Pacific Section, TAPPI. He is Technical Director at the Everett, Wash., pulp mill of Weyerhaeuser Timber Co.

The War Moves to the Pacific and--Believe Us-- That Means No Meetings in the Fur-Fur West

There have been no superintendents or TAPPI meetings held in the Far West since last November and there is no likelihood of any more regional meetings being held until J-E Day.

Western roads are groaning with traffice for the Pacific War. Because of this fact, because distances in that region are so great and because of the well known red point shortages, the Joint Annual Spring Meeting of Pacific Coast Superintendents and TAPPI members—regularly held each year until now—was called off.

There were a few hopeful ideas for a meeting on the Oregon coast or in Canada, but the good judgment of the two groups prevailed and it was decided for patriotic and common sense reasons to give up any regional meetings for the rest of this year and probably till the war is over.

The superintendents' officers elected in Portland, Ore., on June 3, 1944, will continue in office until such time as they can be replaced. These are:

For the Pacific Coast Division, APP-MSA—Chairman, Sam A. Salmonson, Soundview Pulp Co., Everett, Wash.; first vice chairman, Charles E. Ackley, Crown Zellerbach Corp., Lebanon, Ore., Division; second vice chairman, G. F. Alcorn, Weyerhaeuser Timber Co., Everett mill, and secretary-treasurer, Fred Armbruster, Great Western Div., Dow Chemical Co., Seattle.

Commander Cavin Now Heads Regiment

Commander Harold D. Cavin, USNR, on leave from his position as resident engineer, Puget Sound Pulp & Timber Co., Bellingham, Wash., was promoted on June 1 to regimental commander of a Seabee construction regiment in the Philippines.

"Cavvie" went to the Pacific war theater 21 months ago as commander of a Seabee battalion. He now has four battalions under his command, building airfields and other installations as fast as the Japs are ousted from captured territory.

Two Men Have Operations

Ray Mullineaux, chief steam engineer at the Camas, Wash., mill of Crown Zellerbach Corp., Camas, Wash., recently underwent an operation in Good Samaritan Hospital, Portland, Ore.

J. M. Tedford, wage analyst at Camas, had an operation on his back and returned to duty on June 25.

Pacific Paperboard tSaff

Pacific Paperboard Co., Longview, Wash., through E. E. Flood, president, announced promotions or increase of personnel on June 20 as follows: K. W. Gordon, from production manager to superintendent; assistants to Gordon will include, Arnole Maahs, Orville Latimer, and George Pietila, all long-time employes of the company, and James Carney, a recent addition to the staff from White Pigeon, Michigan.

Labor Board Moves For Wage Hearing

Officials of the Pacific Coast Association of Pulp and Paper Manufacturers and two AFL unions, the Paper Makers and the Pulp, Sulphite and Paper Mill Workers, have been informed that the wage demands of some 13,000 workers in 33 Pacific Coast pulp and paper mills have been certified by the War Labor Board for trial.

The two unions are asking a 20% wage increase to offset an expected roll back from a 48 to 40-hour week; an increase in differential pay from two and one-half cents an hour to four cents for swing shift and six cents for graveyard shift; six paid holidays a year; call time for tour workers, and paid life and disability insurance.

These requests were rejected at the Portland, Ore., wage conference in June. Various intermediary steps will be necessary before a final decision.

Puget Sound Mill Group Holds Pot-Luck Picnic

The supervisory and laboratory staff of the Puget Sound Pulp and Timber Co. took the afternoon of June 21 and enjoyed a pot-luck picnic in Whatcom Falls Park, near Bellingham, Wash. About sixty grown-ups and children showed up for the annual over-eating and sports event.

The picnic committee consisted of Luella Warriner, chemist; Gerald Green, project chemist; Jeanette Johnson, shift chemist; and Sidney Collier, assistant superintendent.

The Prospects for Pulp Moulding Industries

This branch of plastics industry is in an experimental stage / / / Ingenuity and mechanical ability, coupled with knowledge of resin and plastic properties, can produce almost any shaped article in strong, light materials / / / Some interesting figures on costs.

By ARTHUR J. NORTON

THE plastics industry started with the production of cellulose nitrate which by plasticization was made into celluloid—the first plastic. Today "chemical cellulose" from the pulping industry is being converted into many esters and ethers for the plastics and related industry. It is interesting to note, too, that the old cellulose nitrate has increased in use steadily in spite of the introduction of many new plastic materials. It is characteristic of the plastic industry that all new products or processes have merely expanded the whole field of use and never actually displaced an old product entirely.

The use of wood flour as a filler for the thermosetting types of plastic products is another phase of the industry where wood has played an important and necessary role.

In paper laminates, plywood and laminated wood, the forest products industries and plastics industry have supplemented each other.

Today there are two fields of plastics ready for a real expansion that are of particular interest because of their relation to our pulp and paper industry.

One of these is the so-called pulp or fiber molding and the other is the oldest of all fields—cellulose esters and ethers. The first is a mechanical adaption of the papermaker's art to large plastic moldings of great strength and the second is the development of the derivatives of chemical pulp into better and cheaper plastics than are possible in that field today.

The present paper is a discussion primarily of pulp or fiber molding. The use of plastics has been largely restricted to relatively small objects because of two factors, first, the inherent strength is too low without fiber reinforcing. Second, with the present methods of fiber reinforcing, the formation of large curved shapes is difficult by standard molding techniques because the fibrous filled plastic materials are bulky and hard to distribute evenly in the mold and because the paper and cloth reinforced articles are limited to shallow draw pieces, except by expensive and slow "laying up" processes. Bag molding, transfer molding and electronic preheating have all been big aids to the plastic art, but are not sufficient by themselves to enable intricate large strong pieces to be made at reasonable costs.

THE AUTHOR OF THIS ARTICLE, Mr. Norton, is a New Englander who moved recently to Seattle to establish business as a consulting chemist at 2919 First Ave. South. He has long been widely regarded as an outstanding authority on phases of the chemical and plastics industries. He moved his laboratory from New England to his new Seattle address.

When formed or shaped articles from organic materials are looked at from an economic perspective, there are the pulp dishes, pie plates and egg boxes at $20-$40 a ton. Then there are the true plastics at 35c to $1.50 or more per pound for the finished object. In between this wide range there are no plastic or formable materials. The pulp or fiber molding process makes it possible through its versatility to make school desk tops, high chair trays, chair arms, window sills and glazings and many types of products that lie intermediate in price between the two extremes.

It should be pointed out that the economy of the plastics industry lies in design and adaptability. Direct competition with a wood or metal part is never economically sound. When the part can be redesigned and formed in one piece ready for final assembly without fabrication or finishing, then plastics are economical.

By pulp molding is meant the dispersion of fibers in a water slurry, forming them with synthetic resins to a given shape approaching that of the finished article on a screen or slotted mold by suction or pressure, drying the preform and then molding or compressing to the final object.

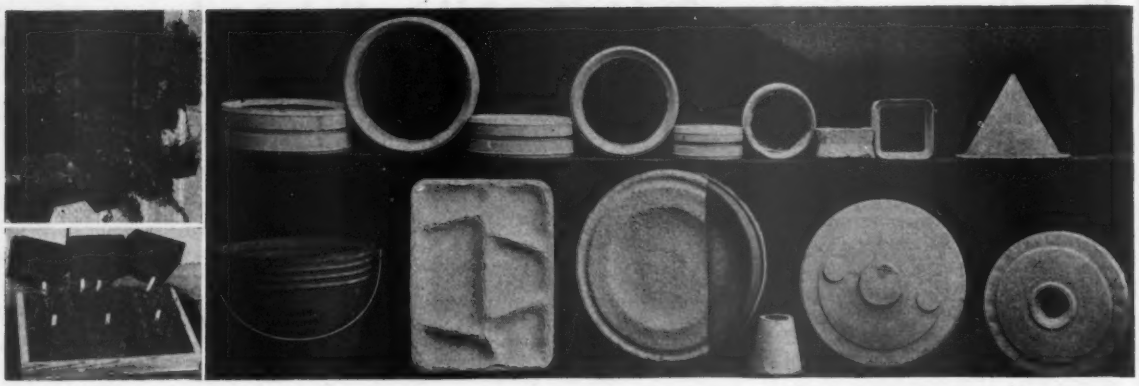
This type of work is not too new, but has only recently been adapted to the newer plastic techniques. Several firms are in actual production today and this phase of the industry bids fair to become one of the largest branches of the plastics industry.

The fibers used can range from groundwood to kraft fiber. Combinations may be used—a core of groundwood can be disposited with a layer of good sulphite fiber on either side.

The Forming Technique Is New

● The forming technique is still new, but in general is an adaption of pie plate molding. The dies can be of bronze or aluminum and may be either screens or slotted shapes. These are attached to suction and dipped into the fiber slurry for a definite length of time to make a mat of the desired weight. Or the dies can be set in a chamber and the fiber slurry forced onto the screen. The adjustment of the screens or slots to deposit the correct amount of the slurry in different sections of the piece is an art gained by experience. The mat is sucked or blown as dry as possible—about 40% to 50% water. "Free" pulp slurries are also desirable to

REPRODUCED from a MONSANTO CHEMICAL CO. advertisement, this imaginative drawing shows a "post-war" schoolgirl seeing her history lesson on a television screen—while the event actually happens — through a plastics viewer that adds three dimension reality to the scene. Even this sleek, modern desk can be made of molded plastic pulp.



EXAMPLES OF SOME NEW PULP MOLDED PRODUCTS MADE BY W. P. LASS MOLDED FIBRE PRODUCTS CO., SANTA CRUZ, CALIF., are shown above.

Another example of how the paper industry has come to the aid of agriculture is the nursery box, made from old newspapers. The box, 6½ in. square, 3 in. deep, is impregnated with asphalt and is waterproof. They save plants from being handled from the time they leave grower until ultimate purchaser puts them in the ground and, with inexpensive wire brackets, they may be used as window boxes.

Some new Lass products: Upper row (left to right)—Nursery boxes in window—a series of gaskets for earthenware pipes—on extreme right, hot pack for field plants, to protect them against frost, heavy rains, sun.

Lower row (left to right)—More nursery boxes, including six fitted into standard nursery flat—3 gal. fruit picking bucket developed for California Department of Agriculture—unfinished Navy food tray (experimental), to be pressed and impregnated with a plastic, making it reusable—top for barrel or drum—upside down flower pot (more room for roots)—tops for water boilers, giving insulation—5 gal. container top.

For description of Lass processes, see page 13, July, 1943, *Pacific* PULP & PAPER INDUSTRY.

give speed of formation. The mat may then be removed and oven dried or die dried.

The resins used and the quantities can vary over a wide or wider range than the fibers. Most industrial articles need the dimensional stability of the thermoset resins—those from phenol, urea or melamine.

The method of dispersion of the resins with the fibers varies from the use of resin emulsions or powdered resins that emulsify in the slurry and are then precipitated on or picked up by the fibers, to the suction of water or alcoholic solutions of the resins through the finished mat.

The amount of resin can be varied. Haslanger & Mosher, Modern Plastics, volume 20, page 76, July, 1943, showed that about 35% of phenolic resin gave maximum strength. This is too low in a standard plastic to give good flow, but no real flow is necessary in molding these preforms. A core of 35% phenolic resin could be used and the preform could be coated with a surface coat of resin just before pressing to give high gloss and finish. A dark phenolic core could have a white melamine or a thermoplastic face. Low resin cores with higer resin exterior layers can be used.

The versatility of the process is such that many different types of structures can be formed.

Oven drying, when the thermosetting resins are used, has to be done at a low enough temperature to prevent premature "curing" or setting of the resin. Shrinkage also has to be allowed for.

Die drying or curing right on the screen die is possible in certain types of pieces. The screen with suction still on is pressed into a hot die the shape of finished piece and the heat dries and cures the resin into a finished part in one operation.

Bag molding for deep draw or undercut pieces has been used by Hawley Products., St. Charles, Ill.

The industry is in an experimental stage where ingenuity and mechanical ability, coupled with a knowledge of resin and plastic properties can produce almost any shaped article, finished and ready for sale in a strong light material. For some purposes low pressures can be used. In others high pressures are desirable.

The inherent strength of the plastics themselves may some day make the mechanical methods unnecessary. This day is probably far away, as much research of the most complex type is necessary before strength of polymeric products is understood.

The pulp or fiber molding field looks like an excellent one to start. Considerable work must be done in developing each article, but bath tubs, wash bowls, furniture, refrigerator, boat parts and many other markets are waiting for a light strong product such as this process can produce.

New Pulp Plastic Locker Developed In Oregon

● Ralph Chapman of Corvallis, Ore., saw need for low cost refrigeration cabinets for large farms and believes he has solved the farmers' problem now with a refrigerator housing shell made of a wood pulp plastic.

He uses a defibrator of his own design. The process of reducing the wood is mechanical, with 98 per cent recovery including all lignin in slab wood after bark is removed for fuel.

In 1940, the Chapman Manufacturing Co., which had been making other products since 1931, made quick freeze storage lockers, marketed throughout the Pacific Northwest. But very soon he had to find a substitute for the molded steel housing he used.

His machine, he believes, has solved the problem.

After defibration, the wood is mixed with certain resins, pigment is incorporated, and is then preformed on a screen, similar to a fourdrinier wire. When the screen has picked up a sufficient depth of water soaked pulp, 90 per cent of the water is squeezed from the preform, and the remainder evaporates in the press. The case material emerges from the press with a smooth shiny finish.

Mr. Chapman plans a $300,000 plant making 60,000 lockers per year after the war. Meanwhile, two 500-ton presses are to be delivered next month.

Vice President Clapp of Stein, Hall & Co. Makes Air and Road Tour of Brazil

Brazil is planning an industrialization program, but may have difficulty in maintaining its projected rate of progress, in the opinion of Oliver H. Clapp, a vice president of Stein, Hall & Co., Inc., New York, who recently returned from a five months' business trip to South America. It would appear that it will be some years before there will be radical changes in Brazil's pulp and paper industry, although one large additional mill is being built in Monte Alegre, State of Parana, Brazil.

As suppliers of starches, adhesives and specialties to the paper industry, Stein-Hall sent Mr. Clapp to South America to investigate the possibilities of obtaining materials to supplement some of those which are critically short in this country. Mr. Clapp's trip was a development of Stein-Hall's wartime program for keeping the paper industry in the United States supplied as far as possible with raw materials and specialties necessary for manufacturing paper.

Mr. Clapp flew more than 25,000 miles down the eastern seaboard of Brazil and motored additional hundreds of miles inland from coastal points along the way. He started at Belem and went as far south as Porto Alegre, via Fortaleza, Recife, Baia, Rio, Sao Paulo and Florianopolis.

Speaking of the stands of pinheros, a source of pulpwood in Brazil, Mr. Clapp said that there appeared to be a good deal of thinning out, but that this opinion was based on inland trips necessarily limited (due to road conditions) and on what he saw along the coast. Other recent visitors to Brazil have indicated to PULP & PAPER INDUSTRY that the pine stands, while adequate, may not be of the extent indicated by Brazilian forestry surveys.

One of the purposes of Mr. Clapp's visit was to study the Mandioc industry. Mandioc, a tuberous plant from which tapioca is made, is used extensively as food by the natives and also for the production of flour from which starch is made for the textile and paper industries. The roots are extremely abundant, but the demand for flour by Brazilian textile and paper industries, the principal consumers, is relatively small. The textile industry consumes about ten times that of the paper industry. In addition to paper that Brazil produces, and with allowance for prospective production, it is expected that further quantities must be imported to satisfy internal demands.

As to qualities of paper in Brazil, Mr. Clapp found that a writing papaper similar to our medium grades was produced, and that wrapping papers and tissues are being improved. For the finer qualities of paper, corn rather than the mandioc is preferred as a source of flour

Paper Mill Statistics

Consumption of paper and paper manufactures in Brazil in 1941 amounted to 202,227 tons, 70% of which was supplied by the domestic industry, according to Department of Commerce figures. The aggregate output of the Brazilian mills had risen by 1941 to 140,592 tons. More than one-half of the 1941 output was produced in the state of Sao Paulo, where three of Brazil's largest paper mills are located. Another one-fourth was produced in the state of Rio de Janeiro and the Federal District.

Approximately 40,000 tons of newsprint per year will be added to Brazil's paper production when the new Klabin Industries pulp and paper mill in the state of Parana is completed this summer. This mill is at Monte Alegre, about 300 miles from Sao Paulo, in the heart of the Parana pine district. The mill will have an initial capacity of 110 tons of groundwood, 79 tons of bleached and 44 tons of unbleached sulphite pulp will be available for other paper mills.

The newsprint capacity of this mill will be nearly sufficient to meet Brazil's requirements.

DEAN SWIFT, who has opened office in Chanin Bldg., 42nd and Lexington, New York, where he represents Western Gear Works of Seattle, Wash., Lynwood and Vernon, Calif., and Pacific Gear & Tool Works, San Francisco, makers of all types of gears and geared machinery.

Archie B. Martin Dies in San Francisco

Archie B. Martin, 74, chairman of the board of Pacific Mills, Ltd., and executive vice-president of Crown Zellerbach Corporation, died suddenly June 16 in the Union Pacific Club, San Francisco, following a heart attack.

Mr. Martin was one of the west coast's best known pulp and paper executives. Born in Iowa, he came west as a young man and he made his home in Vancouver, B. C., from 1914 to 1923. He acted as receiver for the old Ocean Falls Co. in 1912 and two years later organized Pacific Mills, which took over the Ocean Falls properties. He was the first president of Pacific Mills, and retained that office until last year, when he was succeeded by Paul E. Cooper. Since then he was chairman of the board.

In 1923, Mr. Martin left British Columbia to become a vice president of Crown Willamette Paper Co., and he was named executive vice president of Crown Zellerbach when Crown Willamette and Zellerbach Paper Co. merged in 1937.

He was a member of the Pacific Union Club, Bohemian Club, San Francisco Golf Club, Menlo Club, Vancouver Club and Shaughnessy Heights Golf Club.

Peru Pulp Market

Imports of pulp rose sharply during the war in Peru and this has come entirely from U. S. and Canadian mills.

These imports totaled more than 5,000 tons in 1943 as compared to only 830 tons brought from Sweden and Finland during 1937.

Of the three paper mills in Peru, only one — the largest — supplements wood pulp with bagasse. It used 4,000 tons of bagsse in 1943 and also in 1944.

Peelable Plastic Coating Announced by Newark Firm

Better Finishes and Coatings, Inc., 168 Doremus Ave., Newark, (5), N. J. offers on request a 16-page illustrated book describing the use, properties and technical data on their peelable plastic film, "Liquid Envelope."

This material has been used as a protective coating upon thousands of warplanes and is believed to have many peacetime applications, such as protecting laid-up equipment; as a peelable protective-coating for finely finished metal, wood or plastic surfaces and as an easily-removed wrap.

Stauffer Takes Over Nevada Plant

Stauffer Chemical Co. has taken over operations of the chlorine-caustic soda plant which is part of Basic Magnesium, Inc., at Las Vegas, Nevada. This is one of the largest and most modern chlorine-caustic soda units in the country. It was built to supply chlorine for the magnesium plant which has been closed. Electric power for operation is supplied by the Boulder Dam station.

In addition to the Nevada operation, Stauffer Chemical Co. operates plants at manufacturing centers throughout the United States.

$6,000,000 Expansion Program for M & O Ties in With Coated Paper Production

Donald D. Davis, the new president of Minnesota & Ontario Paper Co., 500 Baker Arcade Bldg., Minneapolis, has announced completion and approval of plans for a $6,000,000 expansion and modernization program for the company's mills in Minnesota and Ontario.

Plans under which the company will enter the high speed production coating paper field were previously disclosed. Government approval has been obtained on all major projects.

At International Falls, Minn., the program includes a new insulite manufacturing machine increasing capacity 40%, a new research laboratory, additional equipment for grinding wood and manufacturing paper, new plants for bleaching paper, new plants for bleaching 100 tons of kraft paper and 75 tons of groundwood daily (tying in with coated book paper program); mechanical equipment to insure maximum utilization of byproducts and additional structures for housing employes.

At the Ontario mills in Fort Frances and Kenora, improvements will include new facilities for producing groundwood, additions to hydro-electric and steam power plants, modernization of paper machines and wood grinding equipment and new tug and work boats and other marine equipment.

Mr. Davis estimated that when the expansion is completed, the rate of operations will require approximately 5,600 employes in mill and woods, compared with present employment of 4,180, which includes 900 prisoners of war.

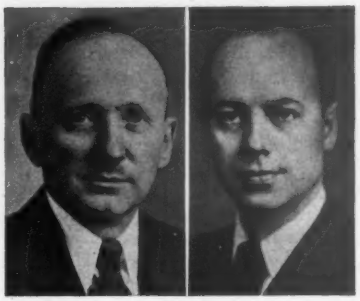
Research Appointments In M & O Co.

Appointment of Milton S. Wunderlich, general sales manager of the Insulite division of Minnesota & Ontario Paper Co., as director of research of the parent company and affiliates is announced.

With development of a new coating paper process for this company's production, Mr. Wunderlich, in turn, announces the appointment of Gilbert Stevens as his assistant. Mr. Stevens will coordinate research, production and sales of the high-speed produced coated papers.

A graduate of the University of Minnesota college of engineering in 1919, Mr. Wunderlich entered the insulation field in St. Paul the same year. He came to M & O in 1932 as a member of the research staff. In 1935 he went to Europe as engineering consultant to the Insulite and was transferred to International Falls, Minn., as assistant resident manager of the M & O mill there. He has been general sales manager of the Insulite division since 1942.

Mr. Stevens has been with Mando since 1939, having come from Kimberly-Clark Corp. where he was in sales promotion. Prior to that he was connected with the Appleton Coated Paper Co., Appleton, Wis.



MILTON S. WUNDERLICH (left) and GILBERT STEVENS (right), new Director and Assistant Director of Research, respectively, for Minnesota and Ontario Paper Co., who will investigate new and improved paper grades for that company.

Mr. WUNDERLICH said Mr. STEVENS will supervise development of processes for coating of papers. A coating paper pilot plant has been in operation by M & O. Mr. STEVENS will coordinate research, production and sales in this new field.

M. & O. Employe Expert Talks to Coast Mill Men

Dr. Boris M. Stanfield, employe relations consultant to Minnesota & Ontario Paper Co., was a visitor on the west coast in late June. Among calls he made in the industry, was a visit at the Crown Zellerbach Corp. mill Camas, Wash., where he made a talk.

Dr. Stanfield had lived for some time in Russia in recent years and his observations were of interest.

Buys Cornwall Mill

Cornwall Paper Mills, Cornwall, N. Y., makers of corrugating board, has been purchased by the San Giacomo Paper Company, Orange, N. J., according to Thomas San Giacomo, vice president, who tells PULP & PAPER INDUSTRY that they expect to enlarge Cornwall capacity from 25 to 100 tons per day. Alterations will be under the direction of Charles Stanziale, Brandford Palace, Newark, N. J.

Maclaren Co.'s Officers

A. Barnet Maclaren has been elected president of the Maclaren Newsprint Sales, Ltd., vice president of the Maclaren Power & Paper Co., Ltd., and vice president of the Maclaren-Quebec Power Co.

A. Roy Maclaren, son of the late Albert Maclaren, a former president of these companies, has been made president of Maclaren-Quebec Power Co. and vice president of Maclaren Power & Paper Co., succeeding the late T. F. Kenny,

Fix-Tex Man Is Killed

Second Lieut. Jamen Loren Cram, for four years an employe of Fir-Tex Insulating Board Co., St. Helens, Ore., on a calender machine, was killed in action during the campaign in the Philippines on March 16. He had won the combat infantry badge before his death.

Oxford Bids $6,700,000 For Bucksport Mill

Oxford Paper Co. of Rumford has bid $6,700,000 for the Maine Seaboard Paper Co., Bucksport, Me., newsprint mill, and timber and steam turbine plant of New England Industries, it is announced by Everett H. Maxcey, industries counsel.

Oxford was lone bidder, but it may be several weeks before any action is taken. Eastern Corp. of Brewer announced it would not submit a bid.

The $6,700,000 bid is for the plant, title to 200,000 acres of timberland and a small steam turbine plant owned by Central Maine Power Co., at Augusta.

Valdosta, Ga., Bids For Newsprint Mill

Representatives of the Southern Newspaper Publishers Assn., seeking a site for a new newsprint mill in the South, were shown three potential sites at Valdosta, Ga., by the Chamber of Commerce and Southern Railway officials in that city.

Slash pine is the predominant species around Valdosta. The consulting engineer for the publishers project has expressed a preference for shortleaf or loblolly pine. Valdosta boosters, however, suggested, a by-product from higher resin content of the slash pine might offset cost of resin removal.

Plowman Is Scott V. P.; Hay to Manage Restored Mill

Francis W. Plowman, general sales manager and a director for the past two years of Scott Paper Co., has been elected a vice president and will continue in charge of sales.

John B. Hay, assistant secretary, has been named resident manager of the Fort Edward, N. Y., paper mill, which Scott bought in Dec., 1944, from International Paper Co. Under Mr. Hay's direction, the Fort Edward mill is expected to resume operation by about Oct. 1.

Basel Brune, legal assistant, succeeded Mr. Hay as assitant secretary of the company.

Dryden Expansion Is Progressing

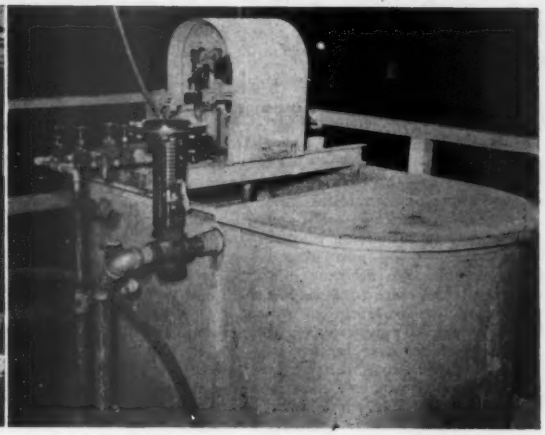
Dryden Paper Co. is pushing ahead its $550,000 improvement program at its mill in Western Ontario, although considerable difficulty has been encountered in securing needed equipment and machinery.

A new recovery plant has been completed, replacing the former unit in operation for many years. The development program is expected to add about 20 per cent to the sulphate pulp capacity, bringing it to a little more than 125 tons a day. Kraft paper capacity is about 16,000 tons a year, leaving a considerable surplus of pulp to find ready market in the United States.

Dr. Bates On Trip

Dr. John S. Bates of Price & Pierce, Montreal, was a recent visitor to British Columbia.

C-E Consistency Controller Saves Power



OLD STYLE STUFF BOX (left) and NEW STYLE C-E CONSISTENCY CONTROLLER (right). These two types of equipment are in the same machine room in a Crown Zellerbach mill, feeding paper machines alongside of each other.

Thus is offered a view of the old and the new, at the same end of the room. The old equipment, of course, is much bulkier than the new—even more so than indicated in these pictures.

The consistency controller—a B-1 Model supplied to the mill by Pacific Coast Supply Co.—requires only a 1/3 HP motor as against the 5 HP motor required for equipment it replaced. Its capacity is 150 tons in 24 hours.

In any operation in a pulp and paper mill consistency control has always required a lot of thinking. Certainly there has always been some sort of an answer; whether that answer is the right answer or merely something to tide over until another answer that looks better comes along is always a matter of individual opinion. Unquestionably, consistency control devices have been continually improving, as is anything else connected with an operational unit.

The installation shown on this page is of some importance because it is actually in operation and doing a more satisfactory job in this particular mill where it is installed than the job has been done in the past. The pictures show the new consistency control device as installed in a Crown Zellerbach mill, and the old type functioning upon the other side on a nearby paper machine.

Before replacement with the present Control-Equipment, both paper machines were fed with the same type of stuff box arrangements. In replacing the stuff box upon one machine with a B-1 C-E Reliable consistency controller, the power itself is of some importance. A five horse power motor was removed, and the new consistency control carries only a one-third horse power motor. It has a capacity of 150 tons on a 24-hour run, and after it is once set requires no adjustment whatever.

The paper mill superintendent says it takes the stock at a variable consistency up to three and one-half or four per cent, with the controller set to deliver a dilution to two and eight-tenths per cent, and that it is giving a consistency control within the extremely narrow limits of .002 plus or minus. He explained its action by saying the agitator has a shaft with a spiral band which is balanced in position, but when the stock grows heavier, the agitator rises and this action is transmitted to the valve to increase the dilution. He adds that this merely dilutes the stock which goes upon the machine while the rest returns to the chest without any dilution. He further notes there is a signal light to show if the stock is heavier or lighter, and to show whether more or less water is being added.

As to time saving, he says that men used to have to come up occasionally to regulate and adjust the older type machines, but the new one requires no regulation. It has been in operation four months without adjustment. He says the mill had never had such uniformity in operating results as the C-E Reliable Consistency Control gives.

The manufacturers list a variety of places where their consistency controllers may be placed to increase operational efficiency. However, in this particular spot, the Crown mill superintendent says it is situated where most needed—that is, where stock goes down to the machine.

Paper Strictly Allotted In British Election

Paper was alloted to candidates in Britain's election campaign on a strict quota basis.

After the announcement of the plans for the election this summer, a member of Parliament—using the age-old prerogative of that body during its so-called "question period"—asked about the availability of paper for candidates.

John Wilmot, parliamentary secretary to the Ministry of Supply, replied:

"The Government have given instructions that paper—including envelopes—is to be made available for the General Election at the rate of one ton for each candidate for a constituency of up to 40,000 electors, with an extra five hundredweights for every additional 10,000 electors; the quantity to be increased by one quarter for independent candidates." (Members: "Why?") "If hon. Members will allow me to proceed, I think they will see from the rest of the reply. The headquarters of the established parties will, in addition, be allowed paper at the rate of one ton for each candidate run by the party. In the case of the small parties, an additional five tons will be licensed, provided that their total quantity is not increased above 40 tons.

"On the announcement of the General Election, candidates will be entitled to obtain their paper on presentation to any paper merchant of a certficate that they intend to stand; this certificate will be signed by the candidate's agent. The certificate will entitle the merchant to obtain replacement of the quantity of paper supplied. There will, no doubt, be a large number of candidates, and, in order to ensure that they shall have no difficulty in securing their supplies promptly, the Paper Control will be ready to license delivery of stock of paper in advance, upon which candidates may draw in due course, to a limited number of paper merchants with whom the parties have made arrangements. The maximum prices in the Control Orders will, of course, apply to these as to other sales."

Viggo Ullman Dies In New York Hospital

E. Viggo Ullman, bleaching expert for the Kamyr process and more recently also a Norwegian government representative for the pulp industry of that country in Washington and New York, died in a New York hospital June 15.

Mr. Ullman was also a lieutenant and flying instructor for the Norwegian air force during the greater part of the war, and was stationed at the "Little Norway" camp near Toronto, Ont., where the refugee Norwegians trained.

Before the war Mr. Ullman was representative for Kamyr process in Japan. The equipment was marketed in North America through Paper Machinery, Ltd., Montreal. Within the past year, Mr. Ullman had made talks and written articles on the Norwegian pulp industry and also equipment for continuous bleaching of groundwood.

Forestry Legislation In Western States

This was a "legislative" year as far as forestry was concerned and new regulations have been imposed in various states of importance to pulp and paper operations.

Washington has a new forest practice act. It is known as Substitute Senate Bill No. 158. Briefly the act which becomes effective January 1, 1946, provides that every person logging more than 3,000 feet of timber per acre must obtain a permit from the State Forester before starting work. To get this permit he must submit a plan as to how he intends to log and how he expects to leave the area so that it will be reforested. The state forester has authority to compel the operator to post cash or bonds up to $8 per acre to guarantee reforesting of cut-over lands.

The major objection raised to the passage of this act was that the measure says the state can take over if lands are not satisfactorily restocked within two years, after logging. Foresters declare this is too short a time. They say that many years there is no seed crop and that at least seven years should have been allowed instead of two before the state takes over.

Objection has also been raised that there are no provisions in the act safeguarding an operator who complies with the law by leaving seed trees and providing fire protection, etc., against storms which might blow down the seed trees or against hunters, fishermen or others or the elements starting fires which the owner cannot control.

The Washington legislature also passed a law creating a Timber Resources Board, which aimed to unify various controls over state timber. It would take the selling of state timber away from the elected state land commissioner and place it in the hands of a board, mostly appointees of the governor.

Political elements have forced a referendum on this issue and it will not be decided until a general election in 1946.

California Legislation

California has new legislation for "self-regulation" by industry of commercial forest use. It is said to be the second state to have such a regulation.

There are three bills in all. One provides for continuity of policy of the state board of forestry by staggering the terms of the board members; the second is an enabling act to provide for the acquisition of forest lands for state forests; and the third declares the interest of the state in the manner of current forest cutting practices and sets up basic standards for handling merchantable timber.

The state has more than 5,000,000 acres of cutover lands, only a part of which is growing a new forest, while the remainder is largely idle.

Under the new law the state commits itself to the acquisition of cut-over lands that show promise of good response to resforestation efforts and which lands are not likely to be held for future timber crops by their present owners.

Unique in that it provides for a maximum of self-regulation is the forest practice act, the state effort to regulate current logging practices to assure the ensuing cutover lands being left in a productive condition without the necessity of artificial reforestation.

The forest regions of the state are divided into four districts. In each district is a district forest practice committee composed of five members. Four members are appointed by the governor from timber owners and operators within the district and the fifth is to be a member of the state board.

Rules of forest cutting and protection are prepared by the committees and must receive the approval of the state board, whereupon they have the force of law.

Joins Marvin's Division In Bulkley, Dunton & Co.

Walter F. Wyman has joined the paper merchandising division of Bulkley, Dunton & Co., it was announced by J. C. Marvin, head of the division.

Mr. Wyman has been representative of Crocker-Burbank papers for the past 20 years. He joined Clarke and Co., exclusive sales agents for Crocker-Burbank in 1925, and when the latter established their own sales agency in 1938, Mr. Wyman continued his activities in selling and promoting the company's papers.

Ecusta Plans Employes Camp

Ecusta Paper Corp. has completed arrangements for the purchase of property known as Camp Sapphire, Brevard, N. C., and plans are under way for development of the camp into a permanent recreational center for mill e director of the company, is in charg of the project.

D. D. ROSENBERRY (right) is new Timber Controller for all Canada, with headquarters in Ottawa. Mr. Rosenberry moved up from Asst. Timber Controller, with offices in Vancouver, B. C.

H. R. MacMILLAN (left), prominent British Columbia timber operator, established the wartime office of Timber Control and was in charge until relieved by A. H. Williamson, who, in turn, has been succeeded by Mr. Rosenberry.

Williamson on Board Of Powell River Co.

A. H. Williamson, Vancouver investment executive who recently resigned as Canada's Timber Controller, has joined the board of directors of Powell River Co. and thus increases British Columbia's representation. He fills the vacancy created by the resignation of H. K. Brooks of Bend, Ore.

One of the best known financial figures in Western Canada, Mr. Williamson has for several years been a director of the big Canadian investment house of Wood, Gundy & Co. He previously represented the company in England.

Consolidated Promotions; George McKee Retires

Richard Collins, manager of the Wayagamack division of Consolidated Paper Corp., for the past twelve years, has been appointed manager of manufacturing for the company.

Harold G. Timmins has been named acting manager of the Wayagamack division.

George M. McKee, assistant to the president of Consolidated, in charge of manufacturing operations, has retired owing to ill health after a career in Canada's pulp and paper industry extending back to 1912 when he built the Donnaconna Paper Co. He was managing director of that company for 10 years. He was a former president of the Canadian Pulp and Paper Association.

Born in Lewiston, Pa., Mr. McKee entered the industry with the Friend Paper Co. at West Carrolton, O., in 1907.

Consolidated Paper Corp., Montreal, announces these additional promotions: George Henderson, formerly controller, to be vice president and controller; Arthur L. Dawe, vice president and general manager of subsidiary St. Maurice Valley Paper Co.; J. O. Chenevert, vice president and general manager, Wayagamack Sales, distributor of kraft pulp and paper.

Kapuskasing Plant Starts Production

Kimberly-Clark Corp. started production in June at its new crepe wadding plant in Kapuskasing, Ont. The mill will produce creped wadding suitable for the manufacture of facial tissue and other specialties, using pulp slushed to it from the pulp plant of Spruce Falls Power & Paper Co.

Wadding from the Kapuskasing mill will be shipped in the form of "hard rolls" to the converting plant of International Cellucotton Products Co., Niagara Falls, Ont.

Wesley F. Cook, formerly of the industrial relations staff of the parent company at Neenah, Wis., is managing the company's operations at Kapuskasing, and several members of the Kimberly-Clark operating staff are now members of his staff: W. R. Kellett, general superintendent; W. H. Swanson, staff superintendent of pulp mills; C. W. Nelson, chief engineer; Forrest Werling, assistant staff superintendent, crepe wadding; J. T. Whelan, assistant chief engineer; Horace DuBois, assistant staff superintendent, pulp department; R. A. Moravek, division engineer, creped wadding manufacturing.

With N. Y. Forestry College

Dr. Hardy L. Shirley, has resigned as director of the Northeastern Forest Experiment Station, U. S. Forest Service, Philadelphia, to become assistant dean of New York State College of Forestry, Syracuse University, was made June 24 by Dr. Joseph S. Illick, acting dean of the college.

Smuck Starts 26th Year

J. W. Smuck, boiler inspector, Soundview Pulp Co., began his 26th year in the Pacific Northwest industry in June. A native of Portland, Ore., he spent early years in the Oregon mills, beginning in the old Willamette Paper Co. of West Linn.

Interesting Vote Record On Reciprocal Trade Bill

The Reciprocal Trade Agreement bill, which has passed in both houses of Congress by substantial majorities, was supported by majorities from paper manufacturing states despite the vigorous opposition of the organized paper industry.

Among those joining the administration supporters in voting for final approval of the bill were Progressive Senator LaFollette of Wisconsin and Republican Senators Saltonstall of Massachusetts, Ferguson of Michigan, Tobey and Bridges of New Hampshire, Burton of Ohio and Morse of Oregon.

In an earier test vote on the important provision of the bill which authorized the President to reduce by 50% the duty rates in effect Jan. 1 in any future trade agreements, the above-named senators, with the exception of Messrs. Burton and Bridges, were on the affirmative side. Democratic Sentor Walsh of Massachusetts voted against this provision, taking the anti-administration side with Republican Saltonstall from his state supporting it.

BMT Chemicals Dept.

O. W. Mielke, general manager of Blake, Moffitt & Towne, has announced addition of an industrial chemical department at the company's San Francisco headquarters division. The new department, which will service Army and Navy units along with large industrial plants, is to be headed by E. F. Davis.

Esco Chicago Office Opens

Electric Steel Foundry Co., Portland, Ore., which formerly maintained a branch office for the mid-western area in Minneapolis, is reopening activities in that territory since the end of the European war, but the branch office is now situated in Chicago, Ill.

Dan Babbitt, long time employe of the company in the engineering department at Portland, and later a member of the San Francisco office, will be in charge. Bob Richmond, who managed the Minneapolis office before the war, but who has since become a member of the Portland engineering staff, visited the territory and introduced Mr. Babbitt to his old acquaintances.

Fir-Tex Acquires Timber

Fir-Tex Insulating Board Co., St. Helens, Ore., has been accumulating timber land on either side of the Columbia river between Longview, Wash., and the coast. Robert Simpson, buyer for the company, has purchased some 10,000 acres of second growth timber including as much hemlock as was possible to find.

Victor Hughes Heads Rotary

Victor A. Hughes, secretary of Pacific Coast Paper Mills of Washington, Inc., was elected recently as president of Bellingham, Wash., Rotary Club and began his term this month. He had been vice president.

Mrs. Walton Leaves

Mrs. Catherine Walton, bookkeeper in the Pacific Coast Paper Mills in Bellingham, Wash., has given up her post with the paper mill and has taken the concession for the dining room of the Shore Acres Resort at Birch Bay.

J. E. "BILL" GOODWILLIE, Sales Engineer, Beloit Iron Works, who since his last trip to the Coast mills has been busy on important postwar machine planning and designing.

Accident Frequency Rate Drops At Camas Mill

A reduction in the frequency rate of disabling accidents has been noted at the Camas, Wash., mill of Crown Zellerbach Corp., as a result of an intensified prevention program initiated Jan. 1. As against a percentage ratio of 28.24 for the first four months of 1944, the same period in 1945 shows only 17.96 — a reduction in frequency of 10.28.

The 1945 program, through its results, shows more intelligent observations among workers of safety rules and practices, and also a better understanding of accident prevention measures.

New Swenson-Nyman Pulp Washer Bulletin

A new illustrated catalog bulletin has been issued by Swenson Evaporator Co., Div. of Whiting Corp., Harvey, Ill., covering the Swenson-Nyman line of pulp washers. This bulletin will be sent free upon request. Write for F-104.

Proposed Union Merger

No action has been taken on President Matthew J. Burns' proposal at Toronto, Canada, that the International Brotherhood of Paper Makers and the International Brotherhood of Pulp, Sulphite and Paper Mill Workers combine forces to form one union. The proposal of the A. F. of L. at New Orleans that C. I. O. and District 50 (U.M.W.) join with A. F. of L., was no more successful.

Retirement Income Plan

Pacific Mills, Ltd., pulp and paper manufacturers with mills at Ocean Falls and converting plant in Vancouver, B. C., have instituted a retirement income plan for all permanent employees, in conformity with Canadian government annuities arrangements.

The plan became effective April 30, with current service benefit contributions commencing as of May 1. Past service benefits for long service employees as of April 30, 1945, are being provided at the company's expense.

New Felt Plant Opens

Pacific Roofing Co., 6350 N.W. Front Ave., Portland, Ore., was scheduled to have a new plant completed and in operation June 15, a complete mill for the purpose of producing felts for its own roofing production. Members of the company are Herbert Malarkey, Howard M. Wall and Thomas C. Young.

Mr. Young, the manager, was formerly with Johns-Manville at Tacoma, Wash., and J. E. Berkheimer. Superintendent of the new operation is Jim Tillman, for 29 years with U. S. Gypsum in Los Angeles and North Tonawanda, N. Y.

Victor Windquist Dies

Victor Windquist, mechanical engineer who was formerly associated with A. H. Lundberg on pulp industry engineering projects in the Pacific Northwest, died June 27 in Seattle.

His most recent work was designing cable laying equipment.

St. Helens Man Killed

Sgt. Vernon L. Stansbury, formerly employed by St. Helens Pulp & Paper Co.,St. Helens, Ore., was killed in action on Luzon, Philippine Islands, on June 8. He had been in the service for three years.

This brings to five the gold stars on the St. Helens Mill Co. service flag of 102 names.

Westminster Co. Dock

A new dock, 200 feet long and 700 feet wide, is now under construction by Fraser River Pile Driving Co. for Westminster Paper Co., New Westminster, B. C., whose $1,000,000 expansion program was recently announced.

Johnny Moak Hurts Shoulder

John Moak, master mechanic, Soundview Pulp Co., Everett Wash., broke a shoulder joint bone in an accidental fall at the mill in June and was carrying the arm around in a sling for some time.

Crown Zellerbach Is Free Of All Indebtedness

Crown Zellerbach Corp. has paid off the remaining $1,500,000 bank loans, according to data furnished the SEC, and for the first time since the merger of Zellerbach Corp. and Crown Willamette Paper Co. in 1928, the company is free of all bank indebtedness.

The liquidation of the remaining balance represented payments due Aug. 1, 1946, and Feb. 1, 1947. The last payment represents culmination of a debt reduction program started in 1931 when funded debt and bank loans aggregated $40,500,000, comprising $35,000,000 funded debt, and $5,500,000 bank loans.

Zellerbach Serves Industry

J. D. Zellerbach, president of Crown Zellerbach Corp., is an industry member of the charter committee drafting a postwar labor-management peace charter. This is the charter sponsored by the U. S. Chamber of Commerce and AFL and CIO unions, which was endorsed by President Roosevelt before his death.

Wins Bronze Medal

S/Sgt. William G. Goodwin, who prior to entering the army was quality supervisor of converting products in the technical department, Crown Zellerbach Corp., Camas, Wash., has been awarded the bronze star medal for service rendered during the Leyte campaign in the Philippines. He is now serving with an AAA gun battalion on Okinawa.

Sorg Buys Tug

Sorg Pulp Co., operating a kraft mill at Port Mellon, Howe Sound, B. C., has purchased the motor tugboat Hyak from the Coastal Towing Co., for $21,000.

The Hyak will be used for general freight towing for the company, but its principal job will be to tow jackpine logs down from Squamish to the mill.

A Prophet Without Honor-- Or, An Analysis of His Job

By A SAFETY DIRECTOR

● A common practice in selecting an industrial safety director is to select someone from the present personnel of the organization. This practice is good for it allows management to know the man well and also insures that he is acquainted with the industry and particular conditions with which he will have to work. And so a safety director is often a "reformed" shipping clerk timekeeper or beater room foreman.

This new safety director, whom for ease of illustration we shall call Joe, has in most instances been interested in safety prior to his selection. The new job is a change for Joe. New responsibilities confront him; different problems and relationships. But what of the people with whom he now has to work? They are still the same gang of supervisors and foremen that Joe has been working with for these several years past. They haven't changed and they see no particular change in Joe. Sure, a new job but the same Joe. Did we need a safety director? What does Joe know about safety?

This is one of the toughest problems for the home-grown safety director. Here, at home, he finds himself a prophet without honor. The guy who was nuts about safety, and finally got a job at it.

What can he do about this condition? In a good many ways, he may want his fellows to feel that it's still the same old Joe. Foremen and supervisors are reacting very typically to the phenomenon of Joe's promotion. Of course they will have trouble seeing hidden values in a man that has been underfoot as long as Joe.

The fact is that there isn't much that Joe can do about it. Sometimes Joe is given a lot of authority with the new job. If he has the tact and horse sense which he needs, he'll be careful in using it on this problem. More often, Joe is given little authority and like the shorn lamb, he faces a cold wind of indifference and lack of cooperation. Sometimes a safety director arises who, by force of his personality and knowledge of psychology, can lick this problem unaided but he may then learn that he can sell these capacities elsewhere for more money than safety directors are paid.

The analysis of the problem usually shows that management has hired the actors but failed to set the stage.

The fact that no industrial organization can afford to be without safety or accident prevention does not alter the fact that many of them "adopt" safety like an orphan child, because they feel it is their duty, and before they are ready and willing to rear it along with the pampered darlings, Production and Sales. Many public relations programs and personnel systems are likewise "adopted."

"Defeatism"

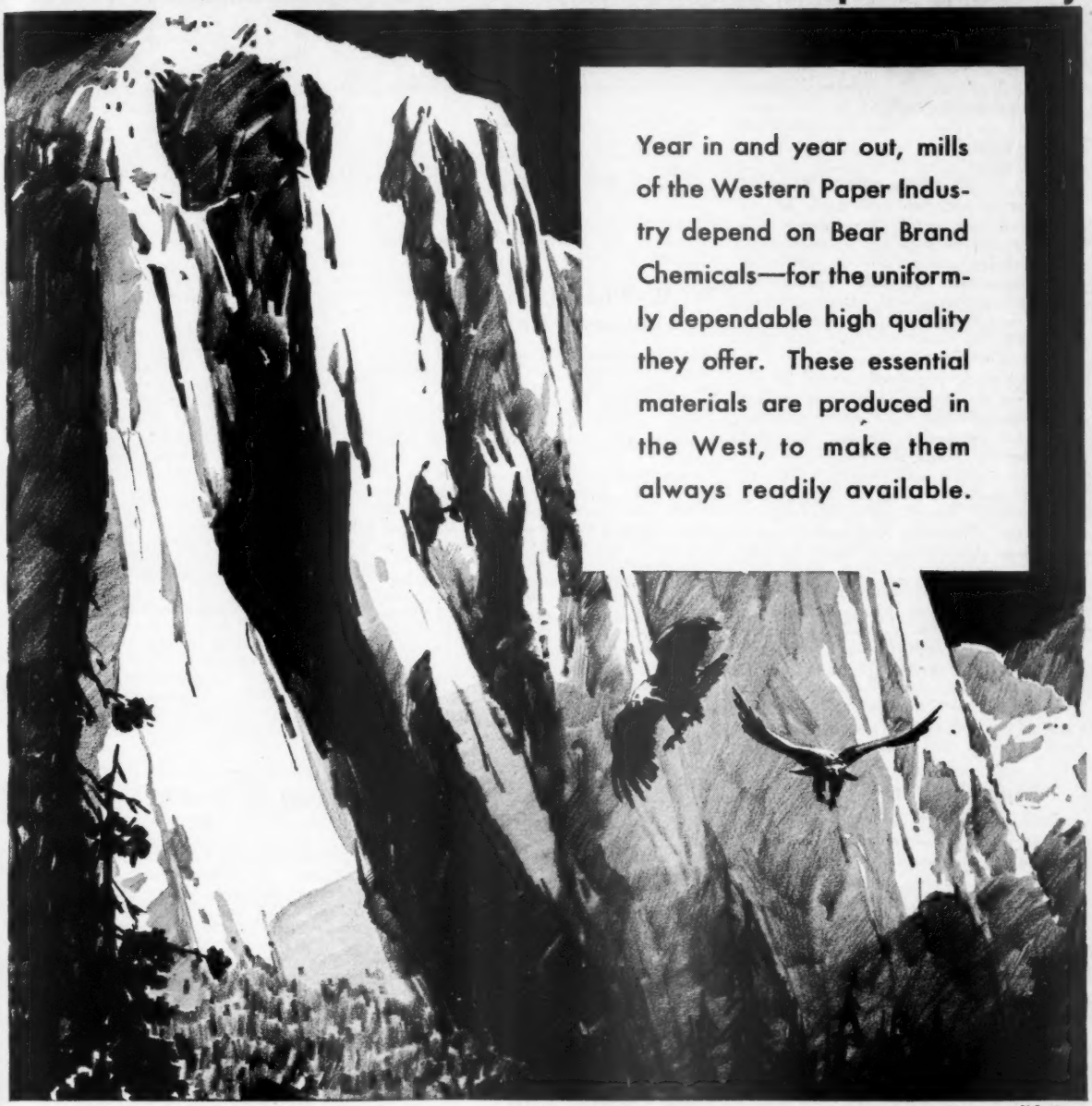
● Safety cannot be placed in the category of something which we want to do when we have time for it. The writer heard the comment from a personnel and safety director the other day that "we don't have time any more to give the new men the proper safety instruction." They do not have time not to give him proper instruction in safety and in all other things which he should know to be a high producing employee in as short a time as possible.

Some industrial safety programs remind us of the time-worn story of the negro woman. She had been told in revival meeting that faith could move mountains. She had a practical problem involving almost identical details in the form of a steep hill which was in her path from her cabin to the church which she loved to attend. After a night of prayer, she went anxiously to the window to see how her faith had fared in moving the hill. On seeing no visible change, she remarked that she "knowed it wouldn't work, nohow." So much skepticism remains in the minds of management that one wonders how they can expect mountains to be moved.

Then too, in all good faith, many managements expect a sort of hocuspocus to be invoked when a safety director is selected and a safety committee appointed. Perhaps the safety engineering profession is at fault somewhat although it certainly is not as far along in creating this impression as the medics and the lawyers and others. There is no such safety black magic. Ninety per cent of safety engineering is the same sort of human engineering by which a manager builds a strong organization. Proper selection, placement, guidance, motivation, reward; they pay the same dividends of success in safety as they do in production organizations. Management mustn't forget that it is from them that all this must spring. Joe hasn't been made a vice president in charge of safety; he's still Joe, the safety director; Joe, who needs the firm hand of support on his shoulder and the constant flow of interest from well-padded swivel chair out to grimy handed mechanic and back again.

It is management's responsibility to see that the dignity of this work is created and preserved. The safety director must be not without honor, even in his own country.

Bear Brand Chemicals for the Western Paper Industry



Year in and year out, mills of the Western Paper Industry depend on Bear Brand Chemicals—for the uniformly dependable high quality they offer. These essential materials are produced in the West, to make them always readily available.

El Capitan

Ammonia • Caustic Soda • Sulphur Dioxide
Chlorine • Zinc Hydrosulphite

GREAT WESTERN DIVISION
THE DOW CHEMICAL COMPANY
Seattle SAN FRANCISCO, CALIFORNIA Los Angeles

GREAT WESTERN DIVISION • THE DOW CHEMICAL COMPANY • BEAR BRAND PRODUCTS
DOW
CHEMICALS INDISPENSABLE TO INDUSTRY AND VICTORY

Growing Demand for Casein in Paper Industry

Casein seems destined to play an increasingly important role in the chemical world, particularly in the manufacture of coated papers and paints, according to an article prepared by the Bureau of Foreign and Domestic Commerce, Washington, D. C.

For many years little casein was recovered in the United States. By 1937, however, more than one-fourth of the skim milk and buttermilk utilized in this country entered into the production of dried casein, the output of which totaled more than 67,000,000 pounds. Established practices and recent developments suggest a potential demand for this material that may stimulate still greater output in the near future.

The extensive use of casein in the manufacture of coated papers resulted from the demand by modern advertising. As companies realized the need for keeping before the public the eye-catching pictures and phrases describing their product they vied with each other in producing beautifully colored advertisements. The need for coated paper on which colors could be better printed became greater.

One of the early methods of making such paper involved the use of curd or pot cheese. Excellent results were obtained but the impossibility of preventing the curd from putrifying, especially in hot weather, made it impracticable. Then dried and ground curd was developed with a success that meant virtual adoption of the method.

Paper Industry Demand

Because of their waterproof quality and durability, casein-coated papers have been in great demand for such items as labels, photographic papers, indicator charts, maps, and certain forms of educational literature where appearance is an important factor. Even in wartime, when the use of coated papers was restricted, the paper industry accounted for almost half the casein consumed in the United States.

Nearly 15% of the casein used for nonmilitary purposes in the United States is for the manufacture of adhesives. The need for a water-resistant glue for airplane construction during World War I first led to the extensive use of casein glues in this country. Today these glues are considered suitable for wood, metal, glass, paper, and cardboard.

Before the war, U. S. produced more casein than any other country, supplying almost one-fourth of the total world output. Even then, millions of pounds were imported from Argentina and smaller amounts from other countries. The war, bringing with it a heavy demand for powdered whole milk, resulted in approximately a 66-per-cent decrease in domestic output of casein between 1941 and 1944.

Casein production is centered largely in Wisconsin, California, and New York. These States produced 60.7% of the domestic output in 1943.

U. S. Casein Production
(In thousands of pounds)

Year	Production
1930	41,965
1933	24,087
1937	67,467
1940	46,616
1941	47,346
1942	42,268
1943[1]	18,388
1944[1]	15,266

[1]Preliminary.

Source: U. S. Department of Agriculture.

W. H. Whalen Dies At Vancouver Home

William Henry Whalen, 74, pioneer British Columbia pulp man who, with his brother, the late James Whalen, built and operated the original pulp and paper mill at Woodfibre, B. C., died suddeny at his home in Vancouver June 16th.

Born in Collingwood, Ont., the Whalen brothers first operated in Fort William. They came west in 1910 and organized the Whalen Pulp & Paper Co., building plants at Swanson Bay and Port Alice as well as at Woodfibre.

The Swanson Bay mill was subsequently shut down and the other two mills and properties of the Whalens were taken over by B. C. Pulp & Paper Co.

State Ownership Policies in Saskatchewan

Although the Saskatchewan government has made no further move towards establishment of its own pulp mill, as previously intimated by Resources Minister J. L. Phelps, it has adopted a new timber policy whereby the government wlil not dispose of any of its timber stands to private companies. Instead, it will retain ownership, contract for the logging operations, keep possession of the timber and itself market the product to whom it pleases.

With this policy in effect, private companies will no longer be able to operate in Saskatchewan after thye have logged off their present holdings.

The Saskatchewan government plans to form its own timber and lumber marketing board.

Allan Patton Joins Mead Sales Co.

The Mead Sales Co. announces that Allan T. Patton, of Montreal, joined the sales force of their Pulp Division July 15. For the present, Mr. Patton will be located in the New York offices at 230 Park Ave. Mr. Patton was formerly with Fraser Companies, Ltd. He is the son of the late Jack Patton, for many years prominent in the industry.

Dr. Esselen On Coast

Gustavus J. Esselen, president of Gustavus J. Esselen, Inc., chemical research and development firm, 857 Boylston Ave., Boston, Mass., who has been associated in projects for New England paper companies, was recently a visitor in Pacific Northwest industries.

Dick Buckley Presides At Papermakers' Meeting

Papermakers & Associates of Southern California met at the Rosslyn Hotel, Los Angeles, June 21, with some 40 members and guests present. It was the first meeting presided over by the new chairman, Richard S. Buckley, technical director, Fernstrom Paper Mills, Pomona, Calif. Assisting him were the new secretary, Robert A. Baum, Fernstrom Mills; John Van Ounsem, Pioneer-Flintkote Co., vice chairman, and George M. Cunningham, program chairman, National Oil Products Co.

As it did about the same time last year, the association went "off the trail" for the subject of the evening, Arthur W. Ponsford, Southern California editor of PULP & PAPER INDUSTRY, going far afield from the technicalities of papermaking to describe the humor and drama of the men who go down to the sea in ships and fishing vessels; his subject being, "Adventures of a Waterfront Reporter."

However, members got "back in the groove" later by viewing "Cellulose and Paper," color technical film by the Hercules Powder Co.

Bruce Brown, Jr., chief chemist, Fibreboard Products Co., gave the customary "Current Events in the Paper Industry," quoting largely from the North American Review number of PULP & PAPER INDUSTRY.

Two long-time members, scheduled to leave the Los Angeles area were unanimously elected to life memberships. Gordon G. Halvorsen is transferred to the Dicalite Co.'s Cincinnati branch; while Frank L. Mark has resigned as manager, Western Asphalt Assn., to accept another position in New York.

South Africans in B. C., Report on Wattle Wood Use

South Africa, which has been buying kraft and a few other pulp and paper products from British Columbia in the past, will be able to use much greater tonnage in future, according to representatives of the South African paper control administration who recently visited Vancouver, B. C.

The party consisted of Colonel J. J. Kruger, controller of paper; R. S. Baker, secretary of the control office, and C. B. Pearce, manager for the Transvaal of John Dickinson & Co., paper distributors.

In Vancouver and at Ocean Falls the party were the guests of Pacific Mills, Ltd. Mr. Baker said a few small mills operate in South Africa, most of them using straw as raw material and recently experimenting with wattle wood. South Africa Pulp & Paper Industries, a subsidiary of Union Corp., headed by M. W. Richard, director, produces fine paper and board at Geduld in the Transvaal; National Pulp & Paper Co., operated by Stafford-Mayer Co., at Durban, Natal, produces only board; Premier Paper Mill at Klip River, Transvaal, of which George McKenzie is chairman and H. Schwartz is managing director, produces kraft from waste material.

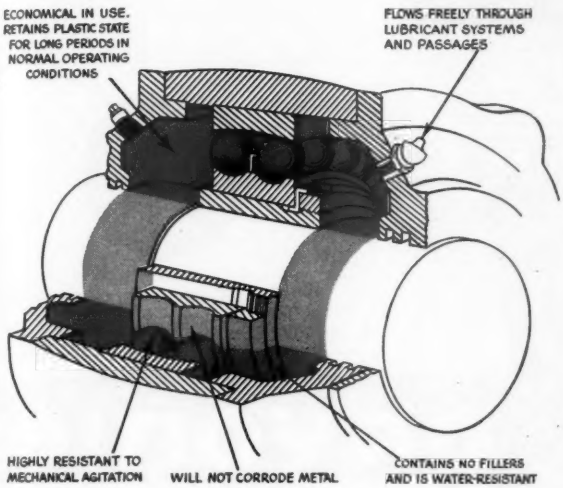
Elliott Pratt Returns

After three years' Army service, W. Elliott Pratt, Jr., who had been a captain, returned to civilian life. He has been elected treasurer of Hollingsworth & Whitney Co., 60 Batterymarch St., Boston, Mass.

STANDARD ENGINEERS NOTEBOOK

VOL. 9-B1 No. 7

Calol Grease holds body in high temperatures


ECONOMICAL IN USE. RETAINS PLASTIC STATE FOR LONG PERIODS IN NORMAL OPERATING CONDITIONS
FLOWS FREELY THROUGH LUBRICANT SYSTEMS AND PASSAGES
HIGHLY RESISTANT TO MECHANICAL AGITATION
WILL NOT CORRODE METAL
CONTAINS NO FILLERS AND IS WATER-RESISTANT

When a high quality "cup grease" type grease is required for ball and roller bearings in normal conditions, Calol Grease is recommended. Calol Grease will remain near its original consistency over a wide range of temperatures and reduce friction to an unusual degree.

Calol Grease is made in a series of six grades: Numbers 0 and 1 are soft, but not fluid. They are used on moderate speed, lightly-loaded anti-friction bearings and high-speed plain bearings.

Number 2 is particularly adapted for lubrication of anti-friction and plain bearings operating under 3000 r. p. m. — may be used in centralized grease systems, compression cups and industrial fittings.

Number 3 is medium-bodied, primarily for use in screw and compression grease cups and high-pressure systems where loads are fairly heavy.

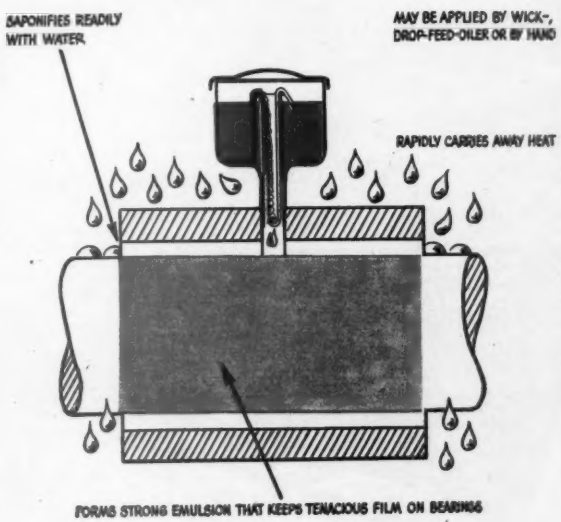
Numbers 4 and 5 are for low-speed, heavily loaded journal bearings using screw and compression cups.

Saponifying oil protects wet bearings

Bearings that operate in wet conditions are assured of constant lubrication by use of Calol Marine Oil—31X. It saponifies readily with water and forms a rich, creamy emulsion. Under the most severe conditions this emulsion provides a tenacious, oily film on bearings that prevents metal-to-metal contact, lubricates and cools.

Calol Marine Oil—31X is made from selected oils which are specially refined and then blended with certain compounds. These compounds give it saponifying qualities and high lubricating values. It is a wide-range, heavy-bodied oil which retains its body well in high temperatures and flows readily in lower temperatures.

Especially recommended for external lubrication, Calol Marine Oil—31X may be applied by wick- or drop-oilers or by free oiling. It is used on shafting, reciprocating pumps, ice machines, air compressors and engines where a saponifying oil is desired.


SAPONIFIES READILY WITH WATER
MAY BE APPLIED BY WICK-, DROP-FEED-OILER OR BY HAND
RAPIDLY CARRIES AWAY HEAT
FORMS STRONG EMULSION THAT KEEPS TENACIOUS FILM ON BEARINGS

Standard Fuel and Lubricant Engineers are always at your service. They'll gladly give you expert help — make your maintenance job easier. Call your Standard Representative or write Standard of California, 225 Bush St., San Francisco 20, California.

STANDARD OF CALIFORNIA

GRAYS HARBOR DIVISION
Hoquiam, Washington

PORT ANGELES DIVISION
Port Angeles, Washington

SHELTON DIVISION
Shelton, Washington

FERNANDINA DIVISION
Fernandina, Florida

RAYONIER
INCORPORATED

Sales and Executive Offices: 122 East 42nd Street, New York 17, N. Y.
Mills: Hoquiam, Port Angeles and Shelton, Wash., and Fernandina, Fla.

DISSOLVING PULPS

for conversion into

Rayon ★ Tire Yarn ★ Cellophane
Photographic Papers
and other
Cellulose-Base Products

Great Northern and Waterous Grinder Features Combined

A heavy type single floor hydraulic grinder that is automatic in operation, is now offered by Waterous Ltd., Brantford, Ont. (Montague Machine Co., Turner Falls, Mass., for U. S.). This has now been developed using the feeding arrangement of the Great Western grinder and the automatic operating features of the Waterous Magazine Grinder, of which over 200 are in operation. This new design of grinder, unlike the high magazine, is adaptable to squared or sawn as well as round wood.

Six of these new type grinders have been ordered by Donohue Brothers at La Malbaie, Quebec, which produces about 160 tons of newsprint and 150 tons of groundwood per 24 hours.

They are designed to improve operation and cut down labor cost. When changing a stone it is not necessary to remove any part of the machine; the upper side frames are unbolted on the center line and slide back on the lower frames. The work is accomplished easily by the use of the pressure cylinder on the grinder, and this opens up the machine giving free access to stone and shaft which can be removed without any interference.

The cylinders are made for high pressure consequent on the use of artificial stones.

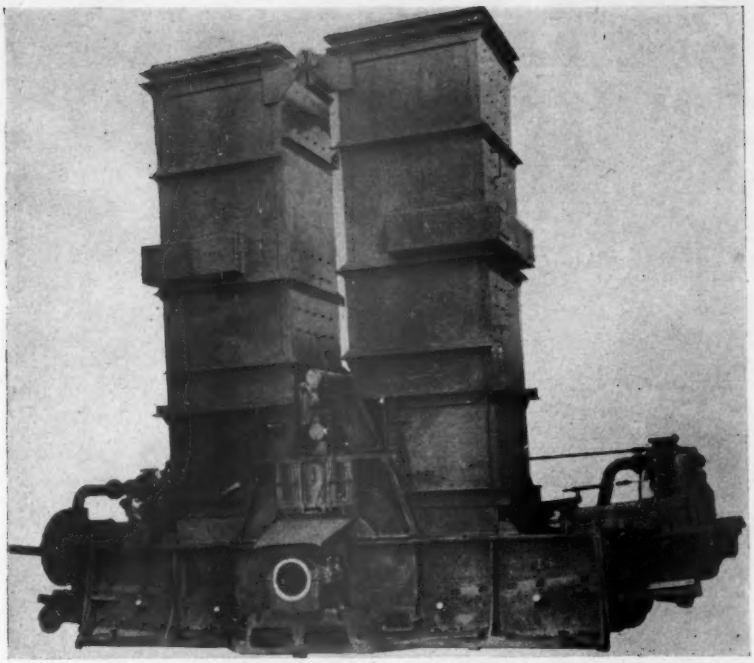
The stone sharpening lathe is of new design made extra heavy and rigid. The carriage slides on round bars and has takeups on the bearings so that all wear can be taken up and an exact setting of the bars maintained. There is a micrometer dial on the adjusting screw which is welcomed by the operators as a much needed improvement, especially since the introduction of the artificial stone.

The automatic operation consists of the control of the cylinders so that when the pocket is nearly ground out the first operation is the reversing of the pressure shoe; second, the door cylinder reverses, allowing the charge of wood contained in the hopper to drop into place in the pocket; third, the door is closed and, fourth, the pressure cylinder advances. The complete operation takes 20 seconds during this period and at all times the load is kept constant by a Wattmeter load control governor. If attached to a water turbine the speed is controlled by keeping a constant load on th grinders, this is accomplished by the use of a new speed control governor.

Appleton Institute Project To Study Stream Effects

The National Council for Stream Improvement of the Pulp, Paper and Paperboard Industries, Inc., has established a project at the Institute of Paper Chemistry at Appleton, Wis. This project will involve, mainly, aquatic biology and will be under the immediate supervision of Dr. Willis Van Horn, the institute's biologist.

Problems involving the effect of various types of mill wastes on fish life will be studied and means for preventing damage to fish will be developed. Experimental work will be carried on both at the institute, which is well equipped for such work, and at mills where problems exist. A number of mills are, at present, carrying on similar work and most of these projects will be coordinated with the institute's work.



SUPER MAGAZINE GRINDERS made by Waterous, Limited, and being installed at Price Bros. & Co., Ltd., groundwood-sulphite-newsprint mill at Kenogami, Quebec.

The machine is made to take stones as large as 72 inches in diameter by 54-inch face. On wood 50 inches long, there is a grinding area between wood and stone of 3600 square inches. The Price Bros. installation is being driven by water turbines, formerly used to drive pocket grinders. Speed and pressure controls are incorporated in the new installation.

New Specifications Issued for Pacific Overseas Shipments

● A two-volume complete collection of specifications covering the packaging and packing of subsistence and resale items for overseas shipments has been compiled and issued by the storage and distribution division, Office of The Quartermaster General.

Volume I (OQMG Overseas Packing and Packaging Specifications for Subsistence) covers subsistence items and is published only for Army use. It does not serve as a purchase specification, and its primary purpose is to supply the personnel of Government agencies interested in packaging and packing with a loose leaf, compact manual, eliminating the necessity of compiling a large voulme of miscellaneous commodity specifications along with other extraneous data.

Volume II (OQMG Overseas Packing and Packaging Specifications for Resale Items) provides full packing and packaging specifications for resale items and forms a part of the contract, or order, when placed with the supplier.

These specifications furnish suppliers with complete information on correct packing and packaging procedure for all types of merchandise. Likewise they furnish the Overseas Quartermaster Corps Inspection Service with information helpful in checking complaints.

Jesse Lewis Handles Drive

Jesse Lewis, superintendent of the Anacortes, Wash., mill of the Coos Bay Pulp Corp., Scott Paper Co., devoted much of his leisure time recently to conducting a clothing collection drive in that city.

Supply Men in Europe Experts in Tropical Packing

Trained long beefore V-E Day, hundreds of experts in tropical packing are now helping speed the flow of equipment from Europe to the Pacific.

A Transportation Corps school in Paris began instruction in tropical packing long before the German defeat, it was disclosed. Hundreds of men were trained in the packaging procedures necessitated by the rigors of Pacific climate.

Extreme temperatures, torrential rain, and humidity which is as high as 80 and 98% in some areas, often cause equipment to rot and rust unless properly packed. In addition, there are few ports, railoads, and good truck roads, and equipment must often be carried by human bearers.

These factors combine to require atmosphere-proof packages, weighing as little as possible, for most equipment.

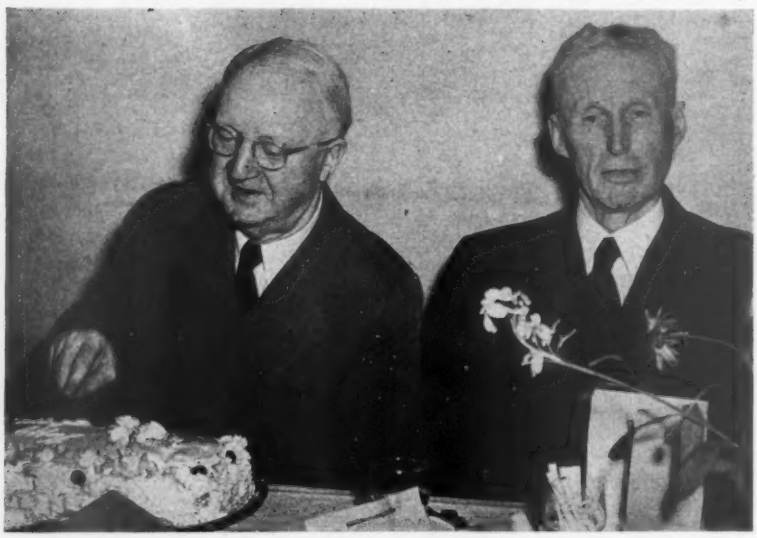
New materials were developed by the Army: a glue which will not dissolve in extreme heat or rain; papers that withstand rain or swamps; lubricating oils that withstand salt water.

New Swedish Mill

A new paper mill is to be established at Skarblacka, Sweden, according to the foreign press. Initial production will include greaseproof paper, and other kinds of cap and wrapping paper. The parent company, the Fiskeby Fabriks A.B., is considering the installation of a new bleaching plant in connection with its sulphate cellulose and kraft paper mill at Liusfors.

Trade Talk

of Those Who Sell Paper



C. J. KAY (left), Columbia Paper Co., cutting his anniversary cake at Vancouver, B. C., dinner in his honor. FRED SMITH (right), of Smith, Davidson & Wright, was master of ceremonies.

H. E. MILLER is new President and Managing Director, Columbia Paper Co., Vancouver, B. C. He headed employees who purchased property from C. J. Kay and the estate of late K. A. Smeed last spring. C. H. Dennis is Vice President; G. H. King, Secretary-Treasurer, and T. Scott, Manager of the Victoria branch and Director. Mr. Miller was General Manager since 1935.

Clyde Swick Fatally Hurt

Clyde E. Swick, 65, for many years Pacific Coast manager with the Graham Paper Co. of St. Louis, was killed in a fall at his home at Oakland, Calif., last month. He leaves a widow and a daughter, Mrs. Clyde Mora of Burlingame, Calif.

Taking Mr. Swick's place is G. J. Long, who has been with the Graham company 20 years. Mr. Long was Mr. Swick's assistant for the past five years in the San Francisco office.

When Paper Men Get Together

Don Weller, Yakima (Wash.) division; and Howard Irish, Reno (Nev.) division, had never met, in fact they didn't even know they had been Zellerbach Paper Co. employees, until Uncle Sam summoned them to Navy signal school. Then they were separated for a year, but one evening found themselves on different ships off Saipan. They kept their blinker lights going for two hours telling all the news.

A Good Picker

L. A. Colton, vice president of the Zellerbach Paper Co., San Francisco, has turned out to be quite a guesser. In a nationwide contest sponsored by the Beckett Paper Co., to see who could guess the end of the European conflict, Mr. Colton chose May 7, the date of the surrender, and thereby won a cash prize of $25. Mr. Colton picked the date because it was just six months after his own birthday.

On June 6, Mr. Colton celebrated 47 years of employment with the big paper house.

Kay Retires As Paper Company President

Charles J. Kay, one of the founders of the Columbia Paper Co., for many years one of the largest paper distributors in Western Canada, was honored following his recent retirement as president of that company, at a dinner in the Terminal City Club, Vancouver, by representatives of the paper industry.

Officials of Powell River Sales Co., Paper Mills, Ltd., and Westminster Paper Co., with officials of the Paper Distributors Council of British Columbia were hosts.

Fred Smith, of Smith, Davidson & Wright, paper wholesale house, presided and presented a silver tray to Mr. Kay, who recalled the early days of the paper industry in British Columbia.

Other speakers included J. A. Young, Pacific Mills; J. McLaren, Smith, Davidson & Wright; H. E. Miller, president of Columbia Paper Co.; Don Agnew, Vancouver Pacific Paper Co.; J. V. Michener, Barber-Ellis of Vancouver, Ltd., J. Cowan, Distributors Council, and F. W. Arthurs, Barber-Ellis, Ltd.

Frank English Dies

Frank R. English, 62, for 20 years associated with Northwest Envelope Manufacturing Co., Seattle, died recently.

Mrs. Pederson Returns

Mrs. Eloise G. Pedersen, secretary to B. P. Jaggard, representative of the Hammermill Paper Co., San Francisco, who was seriously injured when struck by a street car, is back at her desk after four months' convalescence.

Beckwith Appointed Foster Co. Representative

● Charles H. Beckwith has been appointed Pacific Coast representative of the Foster Paper Co., Inc., Utica, N. Y., manufacturers of fine cylinder cardboards.

For California and Oregon only, Mr. Beckwith has been appointed representative of Brown-Bridge Mills, Inc., Troy, N. Y. The W. Ralston & Co., Inc., with mills at Niagara Falls, N. Y., and Old Bridge, N. J., has appointed him California representative for its lines. The Specialty Papers Co., Dayton, Ohio, has appointed him a coast representative.

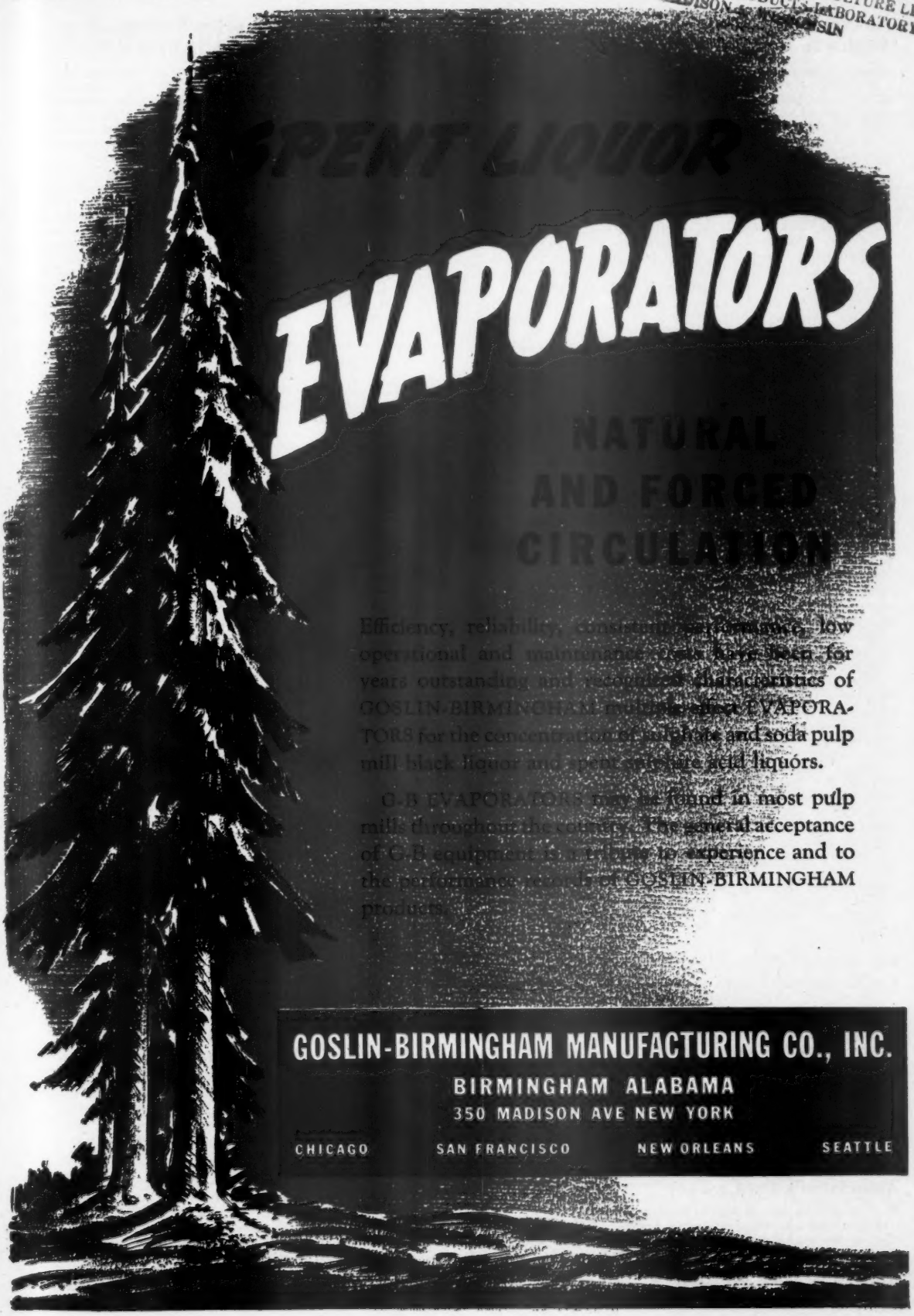
Employees Buy Company

● A group of employees, headed by H. E. Miller, has purchased the Columbia Paper Co., Vancouver, B. C., from C. J. Kay and the estate of the late K. A. Smeed.

Columbia Paper Co. was founded in 1911 and has had a steady growth in the wholesale paper business. At present it has about 70 employees.

Mr. Miller becomes president and managing director, succeeding Mr. Kay, who has retired. C. H. Dennis is vice president, G. H. King, secretary treasurer and T. Scott, manager of the Victoria branch and director.

SUB BRANCH 47
AGRICULTURE LIBRARY
FOREST PRODUCTS LABORATORY
MADISON, WISCONSIN


SPENT LIQUOR
EVAPORATORS
NATURAL
AND FORCED
CIRCULATION
Efficiency, reliability, constant performance, low
operational and maintenance costs have been for
years outstanding and recognized characteristics of
GOSLIN-BIRMINGHAM multiple effect EVAPORA-
TORS for the concentration of kraft, sulphate and soda pulp
mill black liquor and spent sulphite acid liquors.
G-B EVAPORATORS may be found in most pulp
mills throughout the country. The general acceptance
of G-B equipment is due largely to experience and to
the performance records of GOSLIN-BIRMINGHAM
products.
GOSLIN-BIRMINGHAM MANUFACTURING CO., INC.
BIRMINGHAM ALABAMA
350 MADISON AVE NEW YORK
CHICAGO
SAN FRANCISCO
NEW ORLEANS
SEATTLE

Newsprint Situation Begins to Ease Off

The War Production Board's newsprint control order was relaxed by at least 5% in use for all newspaper and some concessions were slightly greater. Thus the U. S. starts back to increased newsprint use after only about one and one half years of limited restriction, in no cases exceeding 25%.

Canadian mills are planning on increase in newsprint shipments to United States customers by 5 or 6%, despite heavier demands on the paper mills for deliveries overseas and for various milittary purposes. Definite delivery quotas will soon be announced.

Canadian newsprint exports to Australia are likely to be heavier, also.

Heavy spring rainfall in the forested regions of central Canada have swelled the rivers to such an extent that little if any wood will be left on the river banks and the spring pulpwood drive has been better than anticipated.

Some 10,000 more men are available for the drive this year and pulpwood started moving towards the mill at least two weeks earlier than in 1944, when forest fires and manpower shortage handicapped operations as well as unfavorable weather.

Australian Newsprint Usage Is Liberalized

The Australian govérnment has announced that, effective March 1, newspapers, whose present permissible usage of newsprint is less than 45% of their base-year consumption (twelve months ended June 30, 1939) are to be granted increase to bring them up to that percentage.

This is a departure from the basis on which newsprint rationing has been calculated by adding an approved percentage to the base-quota allocations, that is, the allocations which operated during the quarter ended Sept. 30, 1943.

Large newspapers were most heavily rationed. Generally speaking, smaller newspapers have not been affected and have had 100%, or thereabouts, of their respective base-year consumptions.

No conditions apply to the use to which the extra tonnage is to be put except that space must be reserved for Commonwealth Government advertising on the existing basis.

No newspaper is permitted to use newsprint in excess of 100 per cent.

Cushing of Brown Co. On Western Tour

Lovell Cushing, manager of the Burgess sulphite pulp mill of Brown Co., at Berlin, N. H. toured the Pacific Northwest with Mrs. Cushing during late June.

He looked over Soundview and Weyerhaeuser sulphite mills and Longview Fibre Co. The Cushings then went to Victoria and Vancouver, B. C., returning home via Canadian Pacific.

New Tide Water Associated's Cat-Cracker

● The world's largest single fluid catalytic cracking unit recently started operation at the Avon Refinery of the Tide Water Associated Oil Co., according to vice president L. F. Bayer. Its charging capacity is over 750,000 gallons of gas oil per day.

HARRY M. HOOKER (left), former President, was elected Chairman of the Board of Hooker Electrochemical Co., on June 20. EDWIN R. BARTLETT (right), former Executive Vice President, was elected President. Mr. Hooker has been with the company since 1913 and on the Board since 1922. In 1938, he succeeded his brother, the late Elon Huntington Hooker, as President. Mr. Bartlett joined the Development & Funding Co., which later became Hooker Electrochemical Co., in 1907 and was elected to the board in 1925.

Northwest Lead Co. Expands Facilities

Roger H. Cutting, president, announces the Northwest Lead Co. will complete in about 60 days an expansion program in its refining unit that will materially increase the production of lead in the Pacific Northwest.

Construction work will include the installation of new furnace equipment, an additional 100,000-pound melting kettle and the extension of the reduction plant building to allow greater storage space and increased operating room.

This move is made in compliance with the governments request for increased production of lead.

In recent months, the position of lead has become very critical due in a large measure to manpower shortages in the various primary lead producing sections of the country and the resultant lead scarcity has thrown an increased burden on the secondary lead producers.

Northwest Lead Co. is an affiliate of the Bunker Hill and Sullivan Mining and Concentrating Co., whose principal mines, mills and smelters are located at Kellogg, Idaho.

Fire Destroys Small Pulp Plant At Longview

Fire of undetermined origin destroyed the 10-tons-a-day groundwood pulp mill of Pacific Paperboard Co., Longview, Wash., June 23. Damage to buildings and machinery was estimated at $15,000 by E. E. Flood, president. The plant had a capacity of 10 tons of pulp daily.

Damage did not extend to the buildings of the main plant because the pulp mill stood apart from other buildings and because fire departments responded promptly to the call.

Plans to rebuild will not be considered unti the end of the war.

To Rebuild Burned Mill

The small 8-ton-a-day groundwood mill of Johnston Pulp Corp., Port Leyden, N. Y., was destroyed by fire. It will be rebuilt, according to John E. Johnston, president.

Newsprint Situation In Great Britain

● While American newspapers have been cut 20 to 25% of their pre-Pearl Harbor size, many of the newspapers in Europe have long since ceased to publish or have been reduced to four or eight pages. In Britain the newsprint allotments were reduced 83½%.

The situation in Britain is described as follows by John L. Young, of the Cosmopolitan Press, London:

More than 1,650 newspapers are published in Great Britain.

This total consists approximately of nine national morning newspapers with circulations ranging from a few hundred thousand to more than 3,000,000; some 30 morning newspapers published outside London, with sales of about 100,000 and upwards; 15 Sunday papers of which the largest sells more than 4,000,000; about 80 evening newspapers, selling from 50,000 to 800,000 and more; and some 1,520 local weekly newspapers with sales of up to 50,000 or more.

Before the war, national morning papers published daily editions of 16-24 pages, the Sundays, 24-32 pages, the others being normally smaller.

Before the war, home mills produced about 860,000 tons of newsprint a year, and about 420,000 tons were imported. The mills had to import all their woodpulp. (The British "long" ton of 2,240 lbs. is used.)

Recently it has been reported that Britain is now receiving more newsprint from Canada, has contracted to buy 240,000 tons a year from Sweden, and is negotiating with Finland.

When war broke out the British government decided that newspapers were essential public services and should be encouraged to carry on. But pulp imports had to be reduced in 1940 to 634,000 tons, in 1941 to 346,000; in 1943, after a slight increase in 1942 to 450,000, to 390,000. Newsprint production consequently fell in 1940 to 294,000 tons and in 1943 to the low level of 95,000 tons.

Thus, in order to save shipping, the whole British press was cut down to 224,000 tons in 1943 compared with about 1,280,000 before the war — a reduction of approximately 83.5%. In other words, in order to approach pre-war supplies, Britain must import newsprint to the tune of 1,000,000 tons, or the equivalent pulp for making it.

British newspapers have not only used lighter-weight newsprint; not only, most of them, adopted an eight-column instead of a seven-column page; they have also reduced editions of 16-24 pages to four pages, their 24-32 page edition to eight.

Traffic Consultant Named for Industry

W. C. Glynn, former assistant freight manager for the Pennsylvania Railroad, has been appointed transportation consultant for all divisions of the Forest Products Bureau, War Production Board, it is announced by Ben Cancell, director of the Bureau.

Mr. Glynn thus succeeds Franklin E. Hufford, who was transportation consultant for the Paper Division, and will also serve the Paperboard, Lumber, Containers and Printing and Publishing Divisions. Mr. Hufford has joined Minnesota & Ontario Paper Co. as traffic manager, as previously reported in PULP & PAPER INDUSTRY.

New Equipment Aids in Small Wood Recovery

Aiming to make the increased recovery and use of small wood in the western forests economically feasible is a new type of pulpwood bundler illustrated in pictures on this page.

The mechanism, reducing to a minimum the handing of individual pieces of wood on the way from forest to mill, has been designed by A. P. Allison, pioneer British Columbia logger.

In view of the growing emphasis on utilization of small wood in the Pacific Northwest the Allison bundling machine may serve a wide field.

Several hundred pieces of wood can be moved economically and efficiently in units of from one-quarter cord to one cord in size.

The machine is operated either by steam or air. If used in a sawmill to bundle slabs, steam from the mill can operate it; if in the woods a small gas-driven air compressor will furnish the power to operate it. If used in the woods, it is loaded by hand and, if in a mill, the wood can be dropped into it from the top af a conveyor.

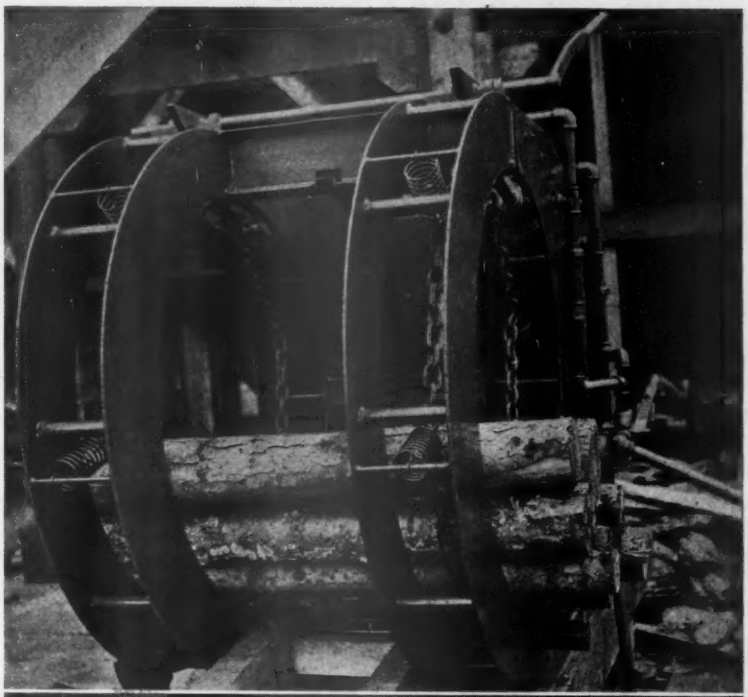
If the wood, on arrival at the mill, needs to be cut into slab lengths, a similar machine is designed to hold the bundle in two jaws, and one cut of a chain or circular saw will cut all the pieces at one time.

The jaws then open from the bottom, allowing the wood to drop into a conveyor and thence into the pulp mill for chipping or grinding. After the machine is loaded the cylinders exert a pull on two chains set around the bundle, which bind it tightly together, a ¾-in. steel band is then placed around the bundle and fastened with a patent fastener, a latch is then released, the jaws of the machine open and the bundle rolls out onto a landing or into the water.

It is possible to tow these bundles in a boom, if necessary, or load onto a truck or railway car.

The machine shown in the accompanying picture contains one quarter of a cord. Larger machines can be built if desired, but by this method an accurate measurement of the wood can be made without any further handling. The steel bands can be used many times over.

Mr. Allison has had a long and varied career in west coast logging. At the turn of the century he was working in the Chemainus mill. He went into the woods as chokerman and later became timekeeper. Eventually, he went into logging business for himself and now operates a sawmill on Burrard Inlet and a logging operation at Nanoose Bay, Vancouver Island.



Top view: Allison pulpwood bundling machine with part load showing its construction and placement of chains which tighten the bundles when pressure is applied. Lower view: A. P. Allison stands beside his pulpwood bundling machine, his hand on the steam throttle.

Elect Searle President

● Worthington Pump and Machinery Corp. directors have elected Clarence E. Searle president, succeeding Harry C. Beaver, who was elected vice chairman of the board and chairman of the management committee. Mr. Beaver had been president since 1931 and Mr. Searle has been vice president in charge of sales since joining Worthington in 1932, following a long period with Allis-Chalmers.

Hobart C. Ramsey, vice president in charge of operations, was elected executive vice president of Worthington. Edwin J. Schwanhausser was elected vice president in charge of sales.

Farrel-Birmingham Appoints Manager of Plant

Farrel - Birmingham Company, Inc., has announced appointment of Robert M. Honegger as general manager of the company's gear plant at Buffalo, N. Y.

Mr. Honegger succeeds Lester D. Chirgwin, who was elected vice president in charge of manufacturing in all four Farrel-Birmingham plants.

Cunningham Elected Officer of ACS Section

George M. Cunningham, program chairman, Papermakers & Associates of Southern California, and manager, National Oil Products Co., Los Angeles, last month was elected vice chairman, Southern California section, American Chemical Society. Following customary procedure, he will succeed T. L. Jacob as chairman in 1946.

HARNESSING THE RAINBOW

Capturing and duplicating the most subtle shades of the rainbow is only the first step in dyestuff application.

The real problem is to harness that color—to make it do a specified job. Breaking colors to harness forms a large part of the work of color specialists of Du Pont's Laboratories. They are constantly striving not only to maintain and improve the quality of production, but also to improve application processes in the dyestuffs industry.

The result of their research is an ever growing stockpile of knowledge, which is at your disposal of paper manufacturers and other users of dyestuffs. E. I. du Pont de Nemours & Co. (Inc.), Dyestuffs Division, Wilmington 98, Delaware.

Du Pont Dyestuffs

BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

DU PONT DYESTUFFS

Acid Making In the Sulphite Pulp Industry

By A. H. LUNDBERG*

CHAPTER IV (Continued)

(Following is a continuation of this chapter, dealing with the theories of gas absorption and the construction of absorption equipment. The first instalment of this chapter was published in our March, 1945, issue.)

VI. ALLOWABLE LIQUOR AND GAS RATES

The height of an absorption tower determines its absorption efficiency and the cross section determines the capacity or the quantity of gas which can be treated.

In packed towers the gas and liquor rates are limited by the tendency of the column to flood. As either liquor or gas velocity is increased, the liquid hold up in the packing increases, the free area for gas flow decreases and the pressure drop through the column increases. A point is finally reached when the gas bubbles violently through the liquid. The pressure drop rises extremely sharply with the slightest increase in gas velocity and much liquid is carried off mechanically by the gas leaving the top of the packing. This point is called the flooding point.

The best operation should be determined by an economical balance of the cost involved, since power for the blower, as well as height and cross section of the tower are all involved.

Actual data on flooding velocities are not plentiful. **Chart XXXVII** plotted as superficial gas velocity, feet per second, against liquor rate pounds per hour per square foot empty tower cross section shows safe operating conditions.

VII. TOWER CALCULATIONS (Absorption of Sulphur Dioxide in Water)

Absorption tower calculations are at best very complicated and especially so for a gas like sulphur dioxide where both films, the gas and the liquid, offer resistance and should be taken into consideration. The "Chemical Engineers' Handbook," second edition, describes fully with illustrative problems eight different methods by which the size of a packed column can be calculated. They all involve considerable work, but are recommended to any one wishing a better understanding of all factors influencing the design of absorption equipment.

The method to be discussed here was suggested by the late Prof. W. L. Beuschlein of the University of Washington. It is a relatively simple method and does not involve any graphical construction.

From the data of Adams[19] (Ind. Eng. Chem. No. 25, 1933) and based on resistances calculated through application of logarithmic mean driving force expression, Professor Beuschlein set forth the equation for 3" spiral packing rings.

$$\frac{1}{K_La} = \frac{180}{L^{0.9}} + \frac{0.2}{G^{0.8}}$$

where:

L=rate of water flow, lbs. water per minute per square foot.

G=rate of gas flow, lbs. gas per minute per square foot.

This equation expresses with fair accuracy the variation of the mass transfer coefficient K_La with rate of gas, G, and water, L, flow through the tower. The data of Adams shows that the liquid film resistance $\frac{180}{L^{0.9}}$ is of much greater importance than the gas film resistance, $\frac{0.2}{G^{0.8}}$, and therefore the values of the total resistance, $\frac{1}{K_La}$, are affected much more by change in the rate of water flow than by change in the gas flow. The Adams data was secured in two series of experiments. In one series at about 75° F, G was held constant at 1.6 lbs. gas (sq. ft.) (min.) while the L was varied from 2.5 to 56.2 lbs. water (sq. ft.) (min.); in the other series at 55 to 62° F, L was held constant at 41.6 lbs. water (sq. ft.) (min.) while G was varied from 0.98 to 2.30 lbs. gas (sq. ft.) (min.). Professor Beuschlein's equations give fairly good representation of Adams data when L is less than about 30 lbs. water (sq. ft.) (min.) and G is in the neighborhood of 1.6 lbs. gas (sq. ft.) (min.). For large values of both L and G, the values of K_La computed from the equation are considerably lower than those which would probably be secured in practical operations under those conditions. The actual value of the mass transfer coefficient is discussed in more detail in Perry's Chemical Engineers' Handbook, 2nd Edition, page 1187, although it should be noted that the values of K_La there given were developed on the basis of a graphically computed mean driving force rather than by the here used logarithmic mean driving force. For purposes of illustrating methods of calculation, it will be assumed that Professor Beuschlein's equation is adequate for all cases, although for any specific case, its inherent limitations should be realized.

Disregarding the deviation of sulphur dioxide from the Henry's Law constants "H" are adopted conforming to **Chart XXXVIII:**

H at 10° C — 50° F = 9.87
15° C — 59° F = 11.86
20° C — 68° F = 14.16
25° C — 77° F = 16.93
30° C — 86° F = 20.51

where: $H = 100 \times p \div C$

and p = atmosphere = mm ÷ 760

C = lbs. SO_2 per cu. ft. water

A more accurate figure for H can be developed for any specific case by the use of **Table XVI, Chapter I,** where for instance, the partial pressure of SO_2 over 1.00% SO_2 solution at 68° F is given as 59 mm. Hg.

$$H = \frac{59 \times 100 \times 1.6}{760 \times 1.00} = 12.30$$

*Seattle, Washington. Mr. Lundberg is Western Manager, G. D. Jenssen Company, New York City.

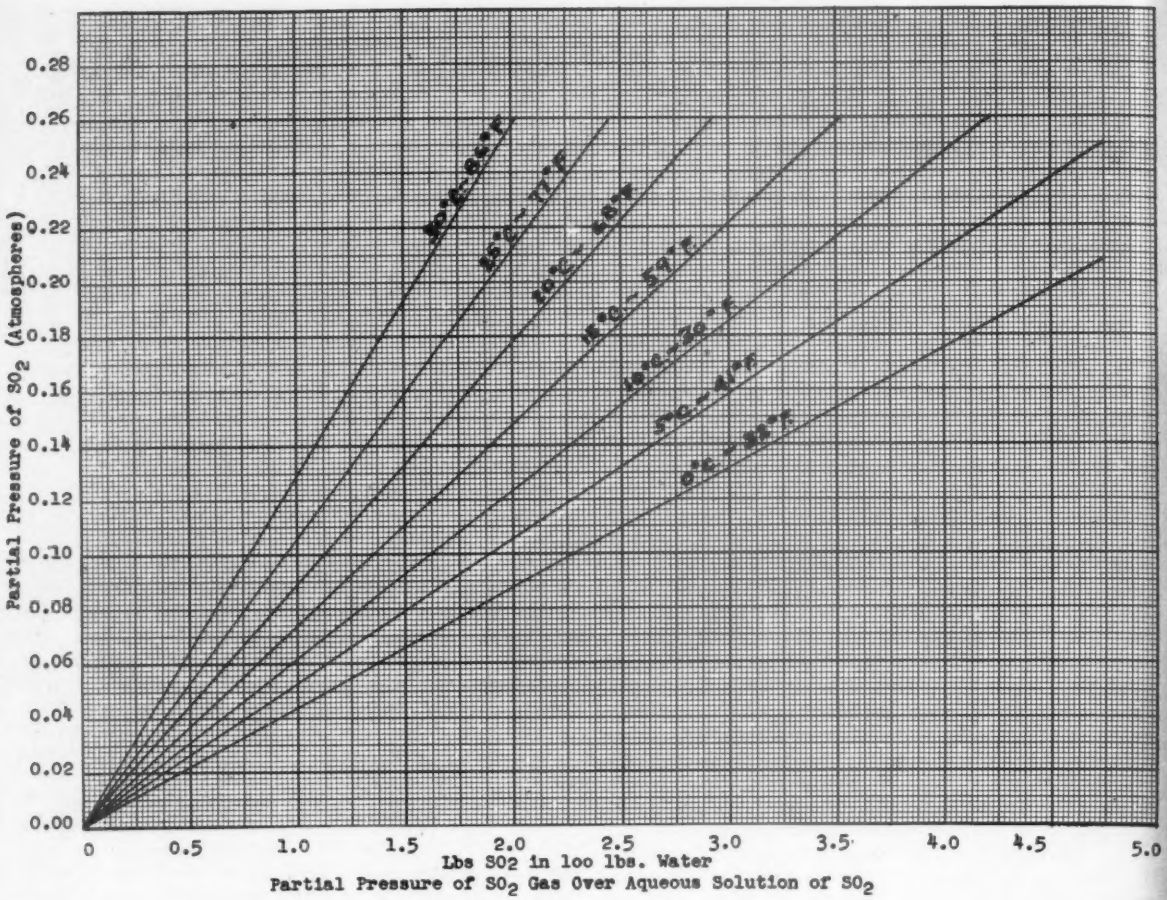


CHART XXXVIII

Professor Beuschlein constructed the equation:

$$l = R_L \times \frac{W}{\Theta} \div A \times \Delta pm$$

where:

l = height of packed column, feet.

$\frac{W}{\Theta}$ = rate of SO_2 absorption, lbs. SO_2 per min.

A = cross section area of empty tower, sq. ft.

Δpm = logarithmic mean driving force.

$$R_L = \frac{l}{K_{La}}$$

K_{La} = mass transfer coefficient per unit volume.

A gas velocity of 0.5 to 1 cubic foot per second per square foot of empty tower cross section has been found most suitable for SO_2 absorption in water. This also holds true in a limestone tower which will be discussed later.

A. LIMITING GAS AND LIQUID RATES

One thousand cubic feet per minute of a burner gas containing 16% SO_2 by volume at 68° F and 1 atm. are to be absorbed in pure water in a counter current packed tower for the purpose of producing the maximum strength solution possible. Assume a recovery of 99.99% of the SO_2. Cooling coils are assumed installed in the tower to maintain the liquor temperature constant at 68° F.

Problem: Determine the minimum water rate at which the tower would operate as planned assuming that there is no limitation on the height of packing available. For vapor pressures of SO_2 over aqueous SO_2 solution, see **Chart XXXVIII.** (Note: Chart XXXVIII shows straight line absorption, which is not theoretically correct. The chart is, however, satisfactory for practical purposes.)

Solution:

$$\frac{1000}{359} \times \frac{460+32}{460+68} \times 64 \times 0.16 \times 0.999 = 26.55 \text{ lbs. } SO_2 \text{ absorbed per min.}$$

From Chart XXXVIII is found the concentration of an aqueous SO_2 solution having a partial pressure of 0.16 atm. to be 1.81 lbs. SO_2 per 100 lbs. water. Therefore minimum water rate is:

$$\frac{26.55}{1.81} \times 100 = 1467 \text{ lbs. per min.}$$
$$= 177 \text{ gallons per min.}$$

B. HEIGHT PACKED COLUMN REQUIRED

One thousand cubic feet per minute of a burner gas containing 16% SO_2 by volume at 68° F and 1 atm. are to be absorbed in pure water in a counter current packed tower for the purpose of producing a 1.00% SO_2 solution. Assume a recovery of 99% of the SO_2. Cooling coils are assumed installed in the tower to maintain the liquor temperature constant at 68° F.

Stainless Steel pipe by ESCO reduces shutdown troubles.

The failure of vital lines and arteries — your pipe system and fittings — means inefficiency, low production, and higher costs. Failures of this sort are reduced to a minimum by the use of *ESCO* fabricated or *Spuncast* stainless steel pipe made of alloy steels, which have proved most satisfactory for use with corrosive liquids handled in the pulp and paper industry.

ESCO pioneered the use of stainless steel in introducing it to many pulp industry applications . . . *ESCO's* first stainless steel installations are giving top-notch service — with many years of unfailing service ahead.

ESCO also furnishes equipment for use with stainless steel pipe such as special or standard cast fittings (flanged or screwed), valves of all types, tubing, and bar stock, of the analysis most suitable to the requirements of the service. Submit your problems to our engineers and metallurgists.

Stainless Steel — Blow Fittings — Blow Pit Bottoms — Screen Plates
Circulating Systems — Heat Exchangers — SO^2 Gas Coolers — Flanged Fittings — I.P.S. Fittings
Tubing — Sheet — Barstock — Winding Wire

ELECTRIC STEEL FOUNDRY

2141 N. W. 25th AVENUE, PORTLAND 10, OREGON

Offices and Warehouses

SEATTLE, 4 ★	HONOLULU, 5 ★	NEW YORK, 17 ★	SAN FRANCISCO, 7 ★	SPOKANE, 8 ★	LOS ANGELES, 11 ★	CHICAGO, 4
2724 First Ave. S.	814 Kapiolani Blvd.	Graybar Building	699 Second Street	121 S. Monroe St.	2700 Santa Fe Ave.	310 S. Michigan Ave.
Telephone	Telephone	Telephone	Telephone	Telephone	Telephone	Room 906
Elliott 4161	6486	Lexington 28958	Douglas 8346	Main 5530	Lucas 7251	Phone Harrison 5456

Four-inch partition rings are used. The gas rate is 1 cub. ft. per second per sq. foot.

Problem: Determine height packed column required.

Solution: Use the equation

$$l = R_L \times \frac{W}{\Theta} \div A \times \Delta pm$$

$\frac{W}{\Theta} = \frac{1000}{359} \times \frac{492}{528}$ x0.16x64x0.99 = 26.4 lbs. SO_2 absorbed per min.

A = 1000÷60 = 16.67 sq. ft.

G = 1x60x666÷7000x492 = 5.32 lbs. per $\frac{}{528}$ min. per sq. ft.

For weight of burner gas from sulphur see Table IX, Chapter I or calculate:

$0.16x64x \left(\frac{1000}{359} \times \frac{492}{528} \times \frac{1}{16.67}\right)$ = 1.59 lbs. SO_2.

$0.05x32x \left(\frac{1000}{359} \times \frac{492}{528} \times \frac{1}{16.67}\right)$ = 0.25 lbs. O_2.

$0.79x28x \left(\frac{1000}{359} \times \frac{492}{528} \times \frac{1}{16.67}\right)$ = 3.44

5.28 lbs. gas.

$\frac{O.2}{G^{0.8}} = 0.05.$

L=26.4x100÷16.67=158.4 lbs. water per min. per sq. ft.

$\frac{180}{L^{0.9}} = 1.89.$

R_L=0.05+1.89=1.94.

P_1 (Gas) = $\frac{16.00}{14.16}$ = 1.13 lbs. SO_2 per cub. ft.

P_1 (SOL) = $\frac{8.9}{14.16}$ = 0.63 lbs. SO_2 per cub. ft. (See Chart XXXVIII for 1.00% Sol. 68° F.)

P_2 (Gas) = $\frac{0.16}{14.16}$ = 0.0113 lbs. SO_2 per cub ft.

P_2 (Sol) = O = Water

$$\Delta Pm = \frac{(1.13-0.63-(0.0113-0)}{2.3 \log \frac{0.5000}{0.0113}} = 0.129$$

14.16 is constant "H" for 68° F.

$$l = \frac{R_L \times \frac{W}{\Theta}}{A \times \Delta pm} = \frac{1.94 \times 26.4}{16.67 \times 0.129} = 24 \text{ ft.}$$

For 4-inch partition rings see Table XXVIII, thus 24 by 1.09÷1.21=22ft. packed column required.

For 99.99% absorption multiply with 2.

22 x 2 = 44 ft. column required.

In practice for full absorption two towers each 44 ft. high would be recommended.

C. EFFECT OF GAS VELOCITY ON HEIGHT COLUMN

Problem: Determine height column required in Example B if gas rate a) increased to 2, b) decreased to 0.5 cu. ft. per sec. per sq. ft.

Solution: a)

$\frac{W}{\Theta}$ = 26.4 lbs. SO_2 absorbed per min.

A = 8.33 sq. ft.

G = 10.64 lbs. per min. per sq. ft.

$\frac{0.2}{G^{0.8}} = 0.03$

L = 316.8 lbs. per min. per sq. ft.

$\frac{180}{L^{0.9}} = 1.01$

R_L = 0.03+1.01 = 1.04

ΔP_m=0.129

$$l = \frac{1.04 \times 26.4}{8.33 \times 0.129} = 25.5 \text{ ft. column required}$$

b)

$\frac{W}{\Theta}$ = 26.4 lbs. SO_2 absorbed per min.

A = 33.33 sq. ft.

G = 2.66 lbs. per min. per sq. ft.

$\frac{0.2}{G^{0.8}} = 0.09$

L = 79.2

$\frac{180}{L^{0.9}} = 3.52$

R_L=0.09+3.52=3.61

$$l = \frac{3.61 \times 26.4}{33.33 \times 0.129} = 22 \text{ ft. column required}$$

As noted there is only a slight change in tower height with tower diameter. A larger diameter tower is therefore preferable in spite of increased fixed charges on the plant, as it

1. Decreases operating cost
2. Permits overloading with smaller loss, and,
3. Allows for emergencies such as temperature rise of tower liquor.

D. EFFECT OF REDUCED OR INCREASED STRENGTH OF SOLUTION ON HEIGHT COLUMN

Problem: Determine height column required in Example B if strength of solution reduced to (a) 0.5% SO_2, (b) increased to 1.5% SO_2.

Solution: The only change is in the logarithmic mean driving force. See Chart XXXVIII for (a) 0.5% solution, and (b) 1.5% solution at 68° F.

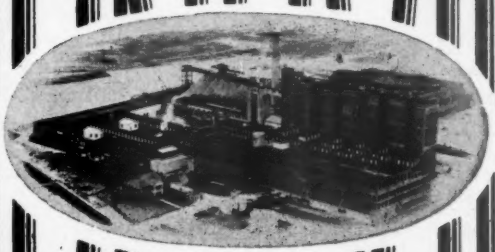
(a) P_1 (Gas) = $\frac{16}{14.16}$ = 1.13 lb. SO_2 per cub. ft.

P_1 (Sol) = $\frac{4.4}{14.16}$ = 0.31 lb. SO_2 per cub. ft.

$$\Delta Pm = \frac{(1.13-0.31)-0.0113}{2.3 \log \frac{0.8200}{0.0113}} = \frac{0.809}{4.279} = 0.189$$

$$l = \frac{1.94 \times 26.4}{16.67 \times 0.189} = 16.3 \text{ feet}$$

SOUNDVIEW



High Grade

BLEACHED SULPHITE PULP

SOUNDVIEW PULP COMPANY

EVERETT · WASHINGTON

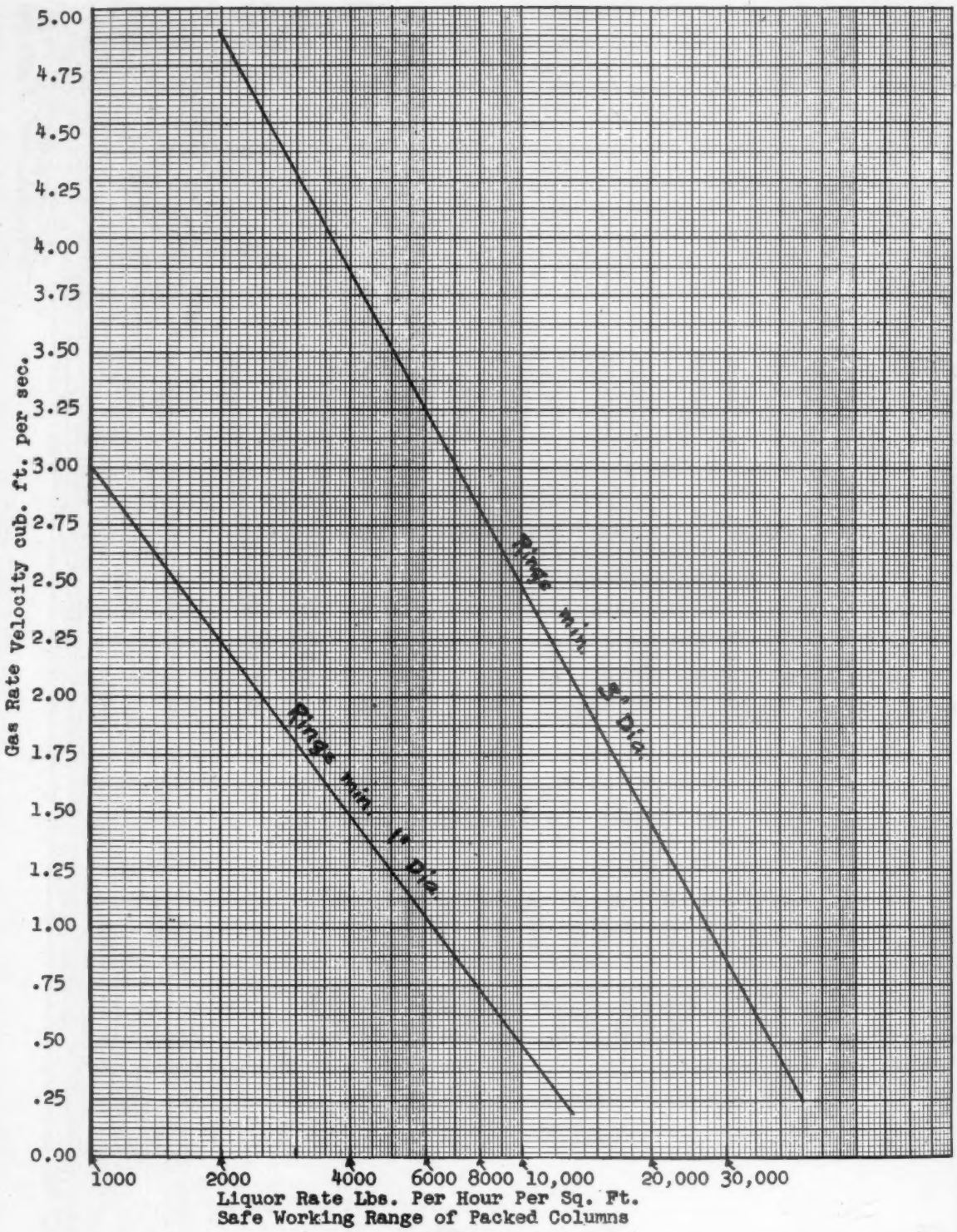


CHART XXXIX

(b) P_1 (Sol) $= \dfrac{13.3}{14.16} = 0.94$

$\Delta Pm = \dfrac{(1.13-0.94)-0.0113}{2.3 \log \dfrac{0.1900}{0.0113}} = \dfrac{0.179}{2.818} = 0.066$

$1 = \dfrac{1.94 \times 26.4}{16.67 \times 0.066} = 46.6$ feet column required

Note: It was specified under B that cooling coils were assumed installed to maintain the liquor temperature constant at 68° F. In the foregoing problems the temperature rise due to the chemical reaction amounts

rgest producer of unbleached sulphite wood pulp in the U.

AIR VIEW OF PLANT • BELLINGHAM, WASHINGTON

ANNUAL CAPACITY 135,000 TO

FIRST AND FINAL OPERATION
IN PRODUCTION OF QUALI
WOOD PULP FOR DOMEST
AND FOREIGN CONSUME

PUGET SOUND PULP & TIMBER CO

Bellingham, Washingto

The American Pulp and Paper Mill Superintendents Association, Inc.

220 East 42nd Street
NEW YORK 17, N. Y.

27th YEAR

RAYMOND L. BARTON, *President*,
Michigan Paper Company
Plainwell, Michigan

HOMER H. LATIMER, 1*st Vice-Pres.*,
The Champion Paper & Fibre Co.
Hamilton, Ohio

RAYMOND F. BENNETT, 2*nd Vice-Pres.*,
Ecusta Paper Corporation
Pisgah Forest, N. C.

OLLIE W. MESSNER, 3*rd Vice-Pres.*,
Robertson Paper Box Co., Inc.
Montville, Conn.

CHARLES H. REESE, 4*th Vice-Pres.*,
Nekoosa-Edwards Paper Co.
Port Edwards, Wis.

JAMES FISH, 5*th Vice-Pres.*,
Paterson Parchment Paper Co.
Bristol, Pa.

GEORGE W. CRAIGIE, *Secy.-Treas.*,
220 East 42nd Street
New York 17, N. Y.

to 1.8°F. per per cent SO_2 in solution (see Paragraph XII, Chapter I) so that the results would not materially change if the coils are eliminated.

E. EFFECT OF INCREASED AND DECREASED TEMPERATURE ON HEIGHT COLUMN

Problem: Determine height column required in Example B if temperature in the tower is maintained constant at a) 50° F, and b) 86°F.

Solution: The only change in the logarithmic mean driving force see **Chart XXXVIII** for 1.00% SO_2 solution at a) 50°F, and b) 86°F.

$$(a)\ P_1\ (Gas) = \frac{16}{9.87} = 1.62$$

$$P_1\ (Sol) = \frac{6.2}{9.87} = 0.63$$

$$P_2\ (Gas) = \frac{0.16}{9.87} = 0.0162$$

$$\Delta\ Pm = \frac{(1.62-0.63)-0.0162}{\frac{2.3 \log \frac{0.9900}{0.0162}}{}} = \frac{0.974}{4.108} = 0.243$$

$$l = \frac{1.94 \times 26.4}{16.67 \times 0.243} = 12.6 \text{ feet packed column required.}$$

$$(b)\ P_1\ (Gas) = \frac{16}{20.51} = 0.78$$

$$P_1\ (Sol) = \frac{12.9}{20.51} = 0.63$$

$$P_2\ (Gas) = \frac{0.16}{20.51} = 0.0078$$

$$\Delta\ Pm \frac{(0.78-0.63)-0.0078}{\frac{23 \log \frac{0.1500}{0.0078}}{}} = \frac{0.142}{2.952} = 0.048$$

$$l = \frac{1.94 \times 26.4}{16.67 \times 0.048} = 64 \text{ feet packed column required.}$$

F. CALCULATE PRESSURE DROP IN A PACKED TOWER.

Problem: Find the pressure drop in the towers calculated under C. Packed column, a) two towers @ 25.5 feet, b) two towers @ 22 feet.

Solution: Use equation and data from Paragraph V.

$$P = \frac{fhv^2}{a^2}$$

(a) f=for 3" spiral rings stacked and wetted = $61 \times 10^{-7} = 0.0000061$
h = $2 \times 25.5 = 51$ ft.
v = 1000 cub. ft. gas per min.
a = 8.33 sq. feet.

$$p = \frac{0.0000061 \times 51 \times 1000^2}{8.33^2} = \frac{6.1 \times 51}{69.5} = 4.5"$$

PULP AND PAPER

LYDDON & COMPANY
(AMERICA) INC.
•
EXPORTERS OF WOOD PULP
TO BRITAIN, SOUTH AMERICA AND
ALL OTHER WORLD MARKETS

PARSONS & WHITTEMORE
INCORPORATED
•
WOOD PULP
WORLD-WIDE PAPER EXPORTERS

10 EAST 40TH ST. NEW YORK CITY

(b) $f = 61 \times 10^{-7} = 0.0000061$
$h = 2 \times 22 = 44$ feet
$v = 1000$ cub. ft. per min.
$a = 33.33$ sq. ft.

$$p = \frac{0.0000061 \times 44 \times 1000^2}{33.33^2} = \frac{6.1 \times 44}{1110} = 0.24''$$

G. FIND SAFE GAS AND LIQUOR RATE.

Problem: Find out if gas and liquor rates in Problem C, a), are safe.

Solution: Calculate gas flow in feet per second and liquor rate in pounds per hour per square foot and use Chart XXXIX.

Gas rate: $\frac{1000}{60 \times 8.33} = 2$ feet per second

Liquor rate: $316.8 \times 60 = 19{,}008$ lbs. per hour per sq. ft.

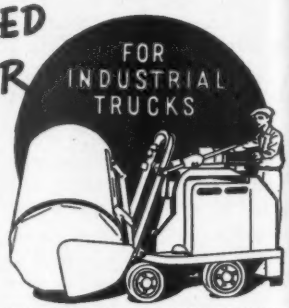
According to Chart XXXIX these are not safe working conditions.

H. CONCLUSIONS.

1. As gas and liquor rates do not materially influence the height of column required for a given separation, adopt the most economical tower cross section.

2. Temperature conditions (temperature of gas and liquor supply) are deciding factors determining height of column required.

3. Strength of solution, i.e., closeness of equilibrium conditions is another factor determining height of column required.

The PREFERRED POWER
FOR INDUSTRIAL TRUCKS
Edison ALKALINE BATTERIES

EDISON STORAGE BATTERY DIVISION, THOMAS A. EDISON, INCORPORATED, WEST ORANGE, NEW JERSEY
DISTRICT OFFICES: 509 POLSON BUILDING, SEATTLE 4, WASHINGTON — 1174 HOWARD STREET, SAN FRANCISCO 3, CALIFORNIA

Now Available on the Pacific Coast—
CORN STARCHES
CORN DEXTRINES
CORN GUMS
BRITISH GUMS
Manufactured by
ANHEUSER-BUSCH, Inc.
St. Louis, Mo.
•
WILLITS & COMPANY, Inc.
1 Drumm St., San Francisco 11
Sales Representative
Telephone Sutter 2894

RAY SMYTHE
Pulp and Paper Mill Machinery and Supplies
REPRESENTING:
RICE BARTON CORP. — HEPPENSTALL CO.
SHENANGO-PENN MOLD. CO.
LANGDON COLLAPSIBLE WINDER SHAFTS
MAGNUS STEEL CORP.
NORTMANN DUFFKE CO.
ATWOOD-MORRILL CO.
SMYTHE MULTIVAT FLAT SCREENS
501 PARK BUILDING, PORTLAND 5, ORE.
Beacon 0502

Do you know the news of the North American Pulp, Paper and Cellulose industries? To read PULP & PAPER INDUSTRY is to be informed. Every issue bristling with news. Subscribe now and get the annual Review Number included with the regular monthly numbers. U. S., $4.00; Canada, $4.50 per year.
PULP & PAPER INDUSTRY
71 Columbia Street Seattle 4, Wash.

The DRAPER Felt
DRAPER BROTHERS COMPANY
CANTON, MASS.
BALFOUR GUTHRIE & CO., Ltd.
Balfour Bldg., San Francisco, Cal.

Frank Murphy Heads Penn Salt Division

Frank E. Murphy has been appointed director of development division, Research and Development Department, Pennsylvania Salt Manufacturing Co., it is announced by Dr. S. C. Ogburn, Jr., manager of the department. Mr. Murphy, who had been assistant to the manager, will now have charge of chemical engineering activities, including pilot plant operations, at Whitemarsh Research Laboratories and at various plants.

Penn Salt Product

Pennsalt PM-90, a specially prepared acid cleaning and descaling compound has been developed by the research and development department of Pennsylvania Salt Manufacturing Co. It contains additional agents for surface action and inhibition.

G. E. Representative Named for Northwest

● Appointment of Floyd D. Good as district representative for General Electric Company's construction materials division in the northwest, has been announced by J. O. Dillingham, western region division manager, San Francisco.

Mr. Good will make his headquarters at 813 S. W. Alder St., Portland, and his territory will include Washington and Oregon.

Perkins-Goodwin Co. Elects Officers

Louis Calder has been reelected president of Perkins-Goodwin Co., 30 Rockefeller Plaza, New York, marketers of pulp and paper. Other officers:

Albert Newcombe and John Lindroth, vice president; W. H. Donaldson, secretary-treasurer; Val B. Friedel, acting treasurer; David I. Edwards, assistant secretary, and H. M. Kraft, cashier.

Western Gear Folder Explains Wartime Problems

● In order to inform customers why deliveries are slower than in pre-war and to create a better understanding of the problems faced by the company, Western Gear Works recently issued a four-page, two-color folder titled "Here Is Why." It explains the "special assignment" work being done on high priority aircraft, marine and ordnance material and is cleverly illustrated by cartoons.

A copy may be had by writing Wayne Hadley, public reations and advertising mgr., Western Gear Works, Seattle 4.

Italian Book Production

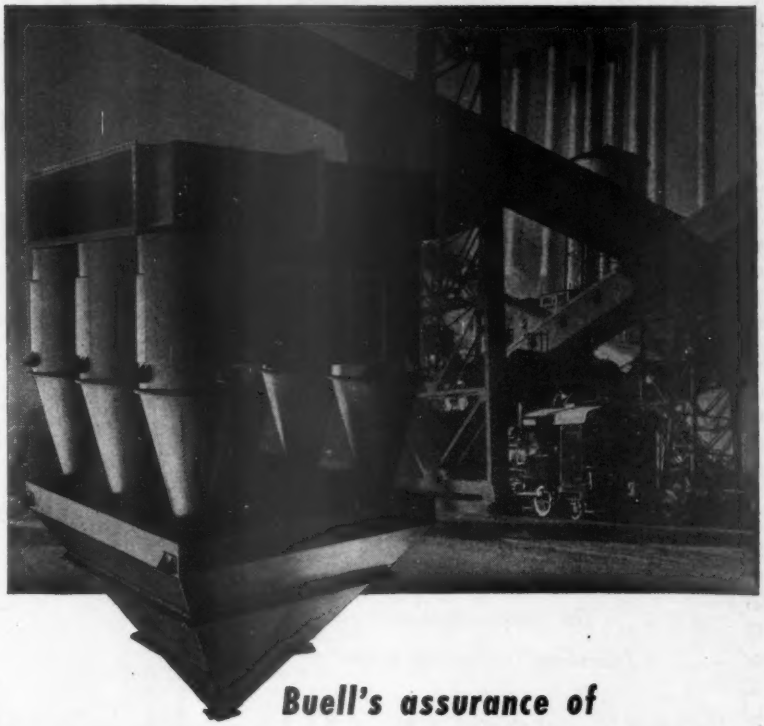
Book publishers in Italy are getting under way and first contracts through EIDA, organization of Italian publishers, and OWI, which makes the selections of U. S. books to be translated, have reached New York. All transactions must be licensed by the Federal Reserve Bank.

Contracts are one of the standard types used by U. S. publishers and call for a guaranteed minimum of 2500 copies of the title.

Cellophane Expansion

E. I. du Pont de Nemours & Co. has applied to the War Production Board for a major expansion at the cellophane plant in Clinton, Iowa. The expansion program would require about a year to complete.

EXTRA STURDY CONSTRUCTION



Buell's assurance of

HIGH EFFICIENCY, LOW MAINTENANCE, LONG LIFE

BUELL (van Tongeren) Dust Collectors have been in use for five or more years without a failure, without the replacement of a part. Many installations having been in continuous use under the most exacting operating conditions and at high working temperatures.

This recognized ability to withstand wear, heat and vibration is due to Buell's extra-sturdy construction. Fabricated of extra thick steel, completely seal-welded inside and out, with welds ground to a flush smooth surface, Buell bodies and cones are as "tight" as a casting. Buell hoppers, for example, have a reputation for especially rugged construction; braced and stiffened with 3" channels that offer strong resistance to vibration.

Finally, because Buell provides this *needed* ruggedness, Buell (van Tongeren) performance is always dependable.

BUELL FEATURES
SHAVE-OFF
LARGE DIAMETERS
EXTRA-STURDY CONSTRUCTION
CORRECT HOPPER DESIGN
SPLIT-DUCT MANIFOLDS
INNER WELDS GROUND SMOOTH

RESULT IN
HIGH COLLECTION EFFICIENCY
LESS FAN BLADE WEAR
LOW DRAFT LOSS
LOW POWER CONSUMPTION
HIGH TEMPERATURE RESISTANCE
UNLIMITED CAPACITY
NO MOVING PARTS
FREE DUST FLOW

PRODUCE
HIGH EFFICIENCY
LOW MAINTENANCE
LOW OPERATING COST
LONG LIFE
NO CLOGGING

buell
DUST RECOVERY SYSTEMS

Engineers and plant executives will find much of interest in Buell's 32-page book:
"The van Tongeren System of Industrial Dust Recovery"

BUELL ENGINEERING COMPANY, INC.
70 Pine Street, New York 5, N. Y.
Sales Representatives in Principal Cities

DESIGNED TO DO A JOB, NOT JUST TO MEET A "SPEC"

"CHROMIUM CORP." CHROMIUM PLATING

"ASTEN" DRYER FELTS

"AMERICAN WRINGER" RUBBER ROLLS

Machine Clothing and Rolls

Mac

Representative

Asten-Hill Mfg. Co.
Orr Felt & Blanket Co.
Chromium Corp. of America
American Wringer Co., Inc.

★

Leonard McMaster
Pacific Building
Portland, Oregon
Telephone - Beacon 9354

"ORR" WOOLEN FELTS

FIBRE MAKING PROCESSES INC.

Russ Building
San Francisco 4, Cal.

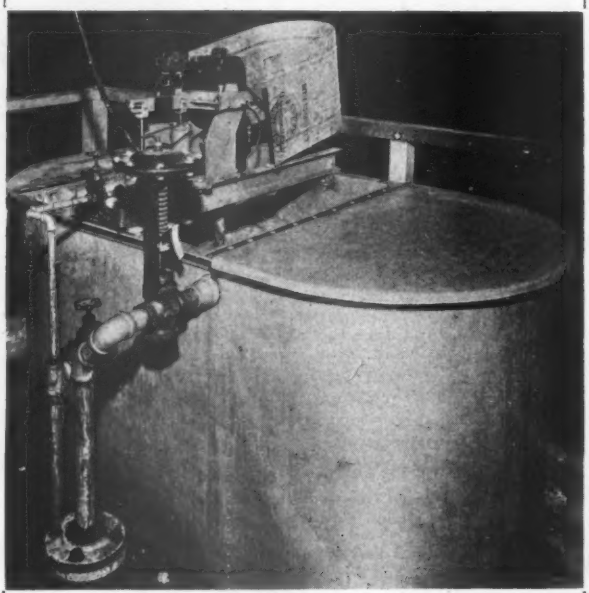
435 North Michigan Ave
Chicago 11, Ill.

Fibre Making Processes (Canada) Ltd.
c/o Horton Steel Works Ltd.
Fort Erie, Ont.

▼

U-Bar Barking & Washing Drum
Orrmell Log Barker
Waplan Bark Press
Nekoosa Chip Cutter
F. M. P. Circ. & Ind. Heating System
Blow Steam Plants
Coolidge Chip Packer
F. M. P. Coarse Screen & Knotter
Thune Pressure Filter
Norman Chip Duster
Drammen Blow Valve
Sandberg Diffuser Valve

CONSISTENCY MEANS UNIFORMITY



C-E CONSISTENCY CONTROLLER

guaranteed to maintain density within one-tenth of one per cent, above or below nominal setting at any density between 2 and 6% . . .

. . . simplicity of adjustment . . . freedom from mechanical troubles . . . rugged self contained mechanism . . . ease of installation . . . surprisingly low cost . . .

. . . used anywhere from blow pit to paper machine to get increased uniformity . . .

Sold by

PACIFIC COAST SUPPLY CO.

Portland San Francisco

California Oil Production At Peak

● Leading California oil men now believe that state has reached the crest of its crude oil production at an average daily volume of about 890,000 barrels, and that production may soon start on a gradual decline, according to the Pacific Coast edition, Wall Street Journal.

It seems worthy of note, the newspaper states, that several hundred new wells brought in this year have not materially increased production. Production is about 150,000 bbls. per day less than demand. Pacific war requirements probably will have to be met by increasing oil shipments to the West Coast.

Bowater's Newfoundland Mills Bonds

● A new issue of $2,500,000 of Bowater's Newfoundland Pulp & Paper Mills, Ltd., first morgtage 4 per cent bonds, series of 1945, is being offered at 100 and accrued interest to yield 4 per cent by Investment Securities (Newfoundland), Ltd.

Proceeds of the sale will be used to refund the whole of the outstanding $2,325,500 of first mortgage 5 per cent bonds (series of 1940) due 1968, which have been called for redemption at 103 and accrued interest on January 1, 1945, and to reimburse the company for expenditures already made.

Beaucoup E's

● The Du Pont Company has passed the 100-mark in "E" awards and stars for war production. In all, 33 plants have received the "E," and a total of 70 stars have been conferred.

MECHANICAL ENGINEERS

Experienced in Design and Production of Equipment to produce Paper Cups, aCrton, automatic Packaging Machinery using Paper, etc.

Must have successful pre-war background. Permanent position with large, progressive organization. In replying give full particulars, places worked, projects, etc.

Institute of Product Research Dept. LAH - 448 S. Hill Street, Los Angeles 13, California.

CONFIDENTIAL EMPLOYMENT SERVICE FOR PAPER AND PULP MILLS

WE INVITE CORRESPONDENCE WITH EMPLOYERS SEEKING EXECUTIVES AND EXECUTIVES SEEKING NEW POSITIONS.

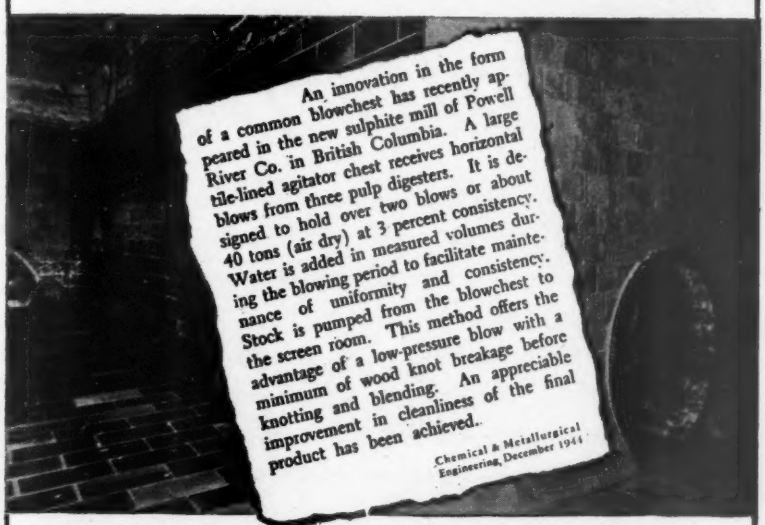
CHARLES P. RAYMOND SERVICE, INC.

PAPER MILL DEPARTMENT
294 WASHINGTON STREET
BOSTON, MASS.

SERVICE MEN'S SUBSCRIPTIONS

In ordering subscriptions for service men overseas, please attach his original written request to your subscription order. Postal regulations require publishers to present original request for their examination on renewal orders as well as new subscription—before the publisher can start or renew the subscription.

The "Innovation" was STEBBINS LINED


An innovation in the form of a common blowchest has recently appeared in the new sulphite mill of Powell River Co. in British Columbia. A large tile-lined agitator chest receives horizontal blows from three pulp digesters. It is designed to hold over two blows or about 40 tons (air dry) at 3 percent consistency. Water is added in measured volumes during the blowing period to facilitate maintenance of uniformity and consistency. Stock is pumped from the blowchest to the screen room. This method offers the advantage of a low-pressure blow with a minimum of wood knot breakage before knotting and blending. An appreciable improvement in cleanliness of the final product has been achieved.
Chemical & Metallurgical Engineering, December 1944

FOR sixty-one years, Stebbins lining "know-how" has been active in making "innovations" work successfully. On your next lining or tank job, call in Stebbins.

SEMCO
Stebbins Engineering Corporation
TEXTILE TOWER SEATTLE 1, WASHINGTON

Human Power

WASHINGTON'S GREATEST ASSET

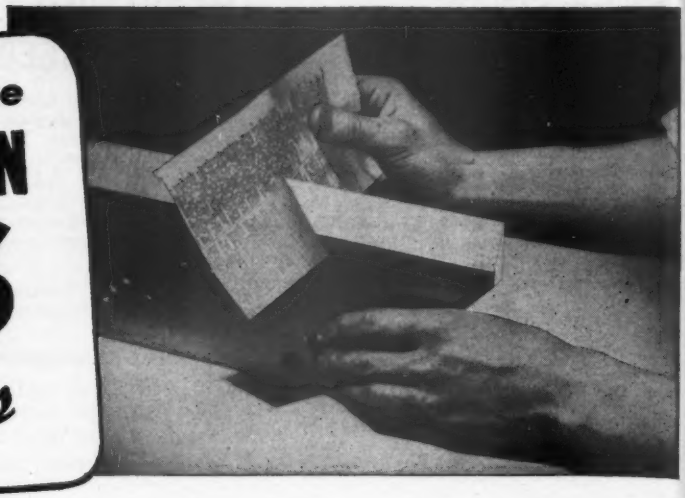
The men and women who man the machines of Washington Industry are one of the State's greatest assets for the attraction of new and expanded activity in the postwar era. They not only have the skill but their wartime record proves that they have the will to do a better job. Puget Power is telling these facts to business, industry and finance throughout the country.

PUGET SOUND POWER & LIGHT COMPANY

FOR a Razor-Keen Edge that STAYS KEEN

ATKINS

Paper Knives



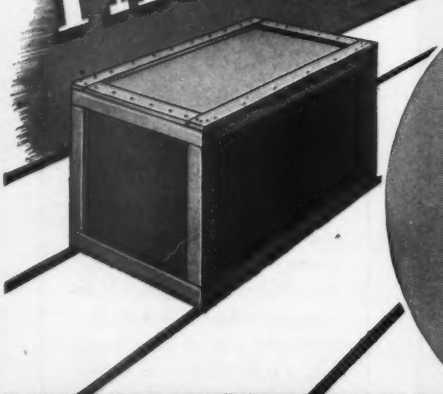
Why do Atkins Paper Knives consistently make cleaner, smoother cuts for longer periods of cutting? It's the result of using finest alloy steel obtainable... heat treating it scientifically . . . then grinding to a razor-keen edge. That's why, in numerous cases on record, they are reported as giving double to many times the service of previous knives.

Yes, Atkins Paper Knives mean quality cutting, more cuttings per grinding, and lower knife costs. Get these advantages on your cutting operations . . . Specify Atkins Paper Knives on your next order.

E. C. ATKINS AND COMPANY • 402 South Illinois St., Indianapolis 9, Indiana

Agents and Dealers in all Principal Cities the World Over

HOW TO PACKAGE A *Masterpiece*



Inside this box is an Orr felt, clean and flawless. It's no ordinary box for it is free from splinters . . . it is strong . . . and it is so constructed that no protruding nails can damage the valuable contents.

At Orr we take great pride in the "little things" such as correct packaging, storing, mothproofing, etc. And we feel that our interest in Orr felts rightly extends into your own mill.

That's why we have instructed our representatives to be of the greatest possible service to you. The next time one calls, allow him to examine your felt handling methods and make any suggestions.

ORR FELTS

THE ORR FELT & BLANKET CO.

PIQUA, OHIO